OL. 70 NO. 10

textile bulletin

JULY · 15 · 1946

A problem of growing interest to the industry, the effect of textile plant wastes on stream sanitation, is discussed in this issue. See article beginning on Page 25.

ABP

ABC

OVERTISING
DEX—PAGE 55

all cotton "picking"...

isn't done in the field!

MOST buyers of cotton fibers are very particular "pickers". They have to be—for in a large percentage of the new markets, which Railway research has successfully opened up, only clean, carefully packed fibers are useable.

Your cooperation and active support plus RAYCO laboratory control will make it possible to win and hold hard-to-satisfy customers. Continuous effort to deliver larger quantities of clean, high quality fibers will assure more profitable markets for us all.

The RAILWAY SUPPLY & Mfg. Co. AND AFFILIATES

Specialists in Grading, Marketing and Processing Cotton Fibers

General Offices: Cincinnati, Ohio

Plants and Sales Offices:	Cincinnati, Ohio Franklin, Ohio Atlanta, Ga.	Charlotte, N. C. Covington, Tenn. Greensboro, N. C.	Chicago, Ill. New York, N. Y. Detroit, Mich.

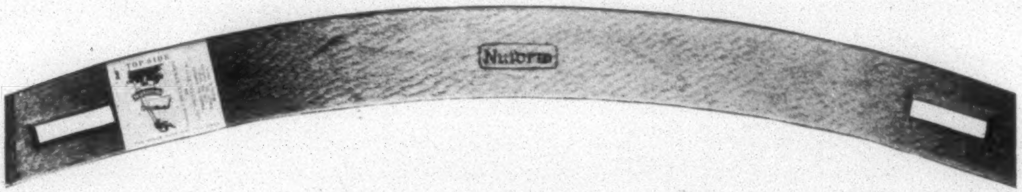
RS M Co

RAYCO COTTON FIBERS

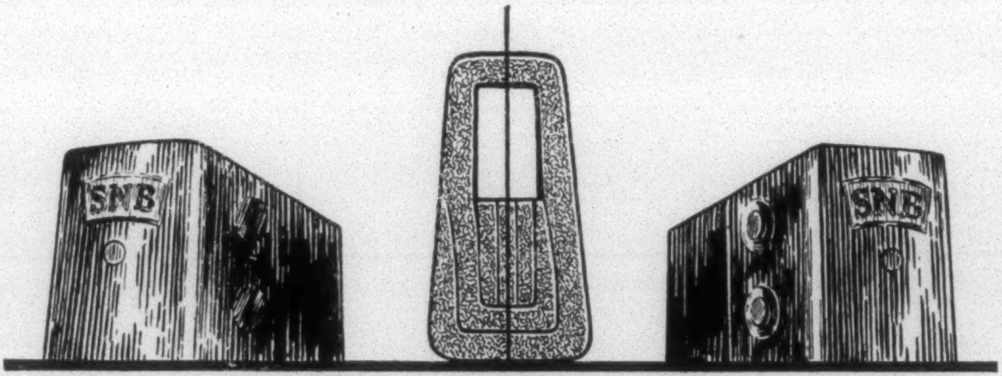
SLIP-NOT *Belting* CORPORATION

COLONEL SLIP-NOT

The Colonel is pleased to report that we are in good shape on NUFORM deliveries and expect to continue prompt shipments.



He also suggests that now is a good time to get some Balanced SLIP-NOT Pickers – Matched and Stretched Hair Harness Straps and Real Binder Leather, and, of course, SLIP-NOT Belts.



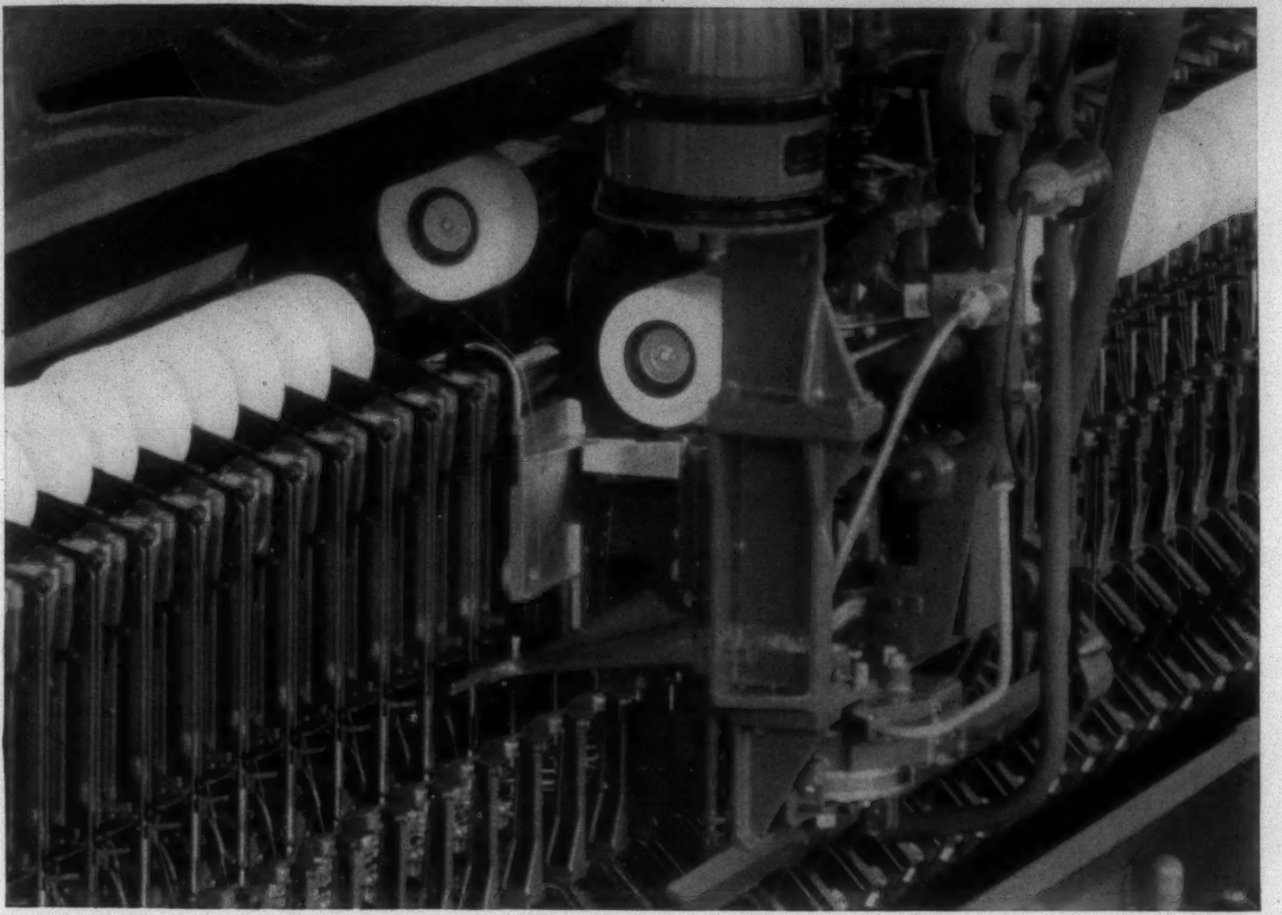
THE BALANCED PICKER

SLIP-NOT *Belting* CORPORATION

KINGSPORT, TENNESSEE

Published Semi-Monthly by Clark Publishing Company, 218 W. Morehead St., Charlotte, N. C. Subscription $1.50 per year in advance. Entered as second-class mail matter March 2, 1911, at Postffloce, Charlotte, N. C., under Act of Congress, March 2, 1897.

BARBER-COLMAN AUTOMATIC SPOOLER



THIS machine delivers a better package to the warper, resulting in better beams to the slashers, better loom beams to the weave shed, and better cloth to the finishers. This means less warper stops, more efficient slashing, fewer loom stops, and less seconds — all valuable advantages in the coming competitive market. Barber-Colman equipment has proved its ability to increase production and lower costs; experience has shown that it gives very little trouble, requires few repairs and very few service calls, and delivers a uniform package steadily with a minimum of down time. *Ask your Barber-Colman Representative for complete information.*

..THIS MACHINE IMPROVES THE QUALITY OF EVERY FOLLOWING STEP IN CLOTH PRODUCTION

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND

The Onyxsans*

Get Lasting Softness and Drape

YOU can give cotton and rayon fabrics a soft, smooth hand, with draping qualities not ordinarily found in such goods. For example, there is no better finish for candlewick spreads than you can get with

The ONYXSANS*

These unique softeners are cation-active. This means that the softness, smoothness and drape they impart to cotton and rayon are *permanent.* Onyxsan lastingly softens cotton and rayon by the effects produced IN the yarn. This is much different from surface oiling. After twenty standard washings a spread treated with Onyxsan will retain virtually all its original softness.

Easy to Use

Thoroughly scoured cloth is given a full dip in the selected Onyxsan solution and then passed over the cans, through the drying range and calendered.

Stable and Uniform

The Onyxsans are synthetics, made from uniform raw materials from a dependable source. Every lot is identical with every other lot. Not only are they uniform and stable, but fabrics finished with Onyxsan do not become rancid in storage. There is no development of odor, no mark off and no stiffening of goods.

For Other Textiles

Onyxsan softness is permanent in cotton and rayon. On silk and wool, the effect is not fast to washing, but the touch can be greatly improved by treatment. Onyxsan is particularly valuable on mixed wool-rayon, cotton-rayon and rayon-silk fabrics. It is in wide use for giving a silk-like softness to Bemberg-topped hose.

Ask for Technical Data and Reports on the Onyxsans Suited to Your Particular Fabrics.

INVESTIGATE
These Other
ONYX SPECIALITIES

REPEL-O-TEX D3 and D4
For providing durable and effective water repellency to cotton, viscose, acetate and other fabrics.

NEUTRONYX 228
A non-ionic, non-foaming surface active detergent and emulsifying agent for all fabrics, with unusual value in scouring acetate, rayon and wool (in acid or neutral solution). It is a highly useful auxiliary for simultaneous scouring and acid dyeing of wool.

ONYX OIL & CHEMICAL COMPANY
JERSEY CITY 2, N. J.
CHICAGO • PROVIDENCE • CHARLOTTE • ATLANTA
In Canada: ONYX OIL & CHEMICAL CO., LTD.—MONTREAL, TORONTO, ST. JOHNS, QUE.
For Export: ONYX INTERNATIONAL, JERSEY CITY 2, N. J.

*Patented

onyx CHEMICALS FOR DYEING AND FINISHING

New Method Solves old Problem

Until recently, our method of hardening castings was by the use of iron chills in the molds. Castings were not always satisfactory . . . they lacked uniformity . . . standards were difficult to maintain.

THE SOLUTION

Electronic Induction Heat Treatment solved our problem by eliminating the inaccuracies of the old method. Positive control is assured of the depth, area, and contour of the section being hardened. To this scientific control we have added modern production methods. Our constant search for improved manufacturing methods results in a finer product.

DRAPER CORPORATION

HOPEDALE, MASSACHUSETTS

One of a Series of Adventures of the Armour Soap Sleuth

The case of the SOILED WOOL

The mill manager was very unhappy. "Someone's been pulling the wool over my eyes!" he cried. "All the time I've been hearing about Mary's little lamb having fleece as white as snow—I never knew that sheep could be so dirty!"

He looked sadly at the wool around him. "This wool-scouring operation of ours is *supposed* to clean up the fibres, leave our wool soft and resilient for the blending and carding."

"I know," said the Armour Soap Sleuth. "And with the right type of soap your raw wool scouring will do just that. To do this job *right*, you need a low-titer soap like Armour's Texscour."

"You see, Texscour, a red oil base soap in flake form, has a low titer of 8-12 °C. Texscour gives quick, lasting suds—and lots of them! Texscour cuts grease, knocks out all soil and foreign material quickly, rinses out at once in warm water. You get a *better, cleaner* scour . . . and delicate wool fibres stay soft and resilient! Incidentally, Texscour is only one of the soaps Armour makes for the textile industry. Give me a ring if you need any help." With that the Sleuth grabbed his trusty glass and was off to solve another textile problem.

INDUSTRIAL SOAP DIVISION

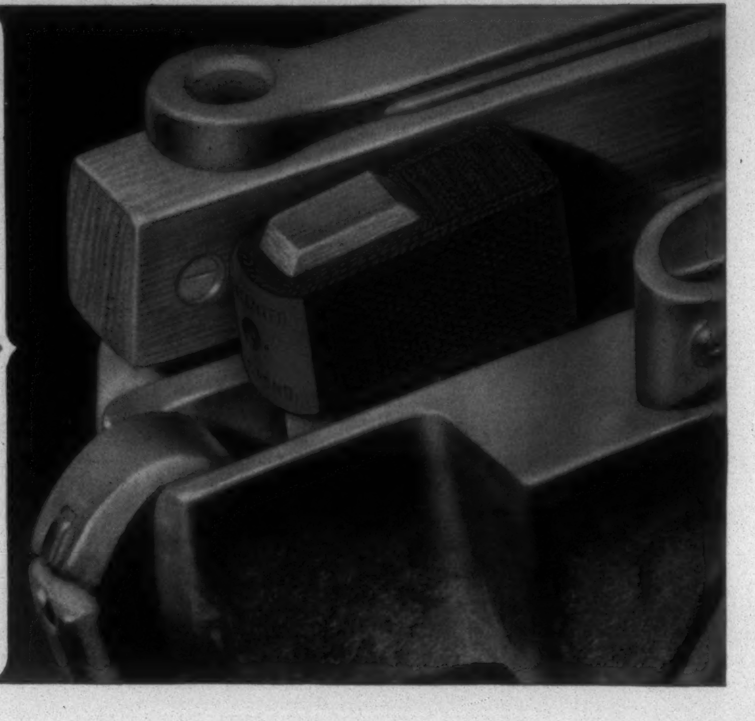
Armour and Company

1355 W. 31st Street, Chicago 9, Illinois

Dayton Deluxe Loop Pickers...

BUILT TOUGH

to stand
increasing
shuttle speeds



As shuttle speeds go higher and higher the advantages of Dayton De Luxe Loop Pickers become greater and greater. They have approximately twice the life of ordinary pickers at today's higher speeds. Put another way, they are cutting picker costs as much as 50%.

Dayton De Luxe Loop Pickers are made of special fabrics and resilient rubber, molded together into a superstrong unit. They are designed with a flared bottom for easy application. Corners are rounded. The picker stick hole is molded for a perfect fit.

If you are not using Dayton Pickers order a few to use as replacements. They will sell themselves to you. Write for full information today.

THE DAYTON RUBBER MANUFACTURING COMPANY
Factory: Waynesville, N. C.
Main Sales Office: Woodside Bldg., Greenville, S. C.

And Here are More Reasons why you should standardize on Dayton De Luxe Loop Pickers

1. Cut picker costs up to 50%.
2. Greatly increase production.
3. Save operating time.
4. When boxed, loom stays in parallel.
5. Throwing a crooked shuttle is eliminated.
6. Jerked-in fillings reduced to minimum.
7. Give month-after-month service on high-speed looms.

Dayton Rubber

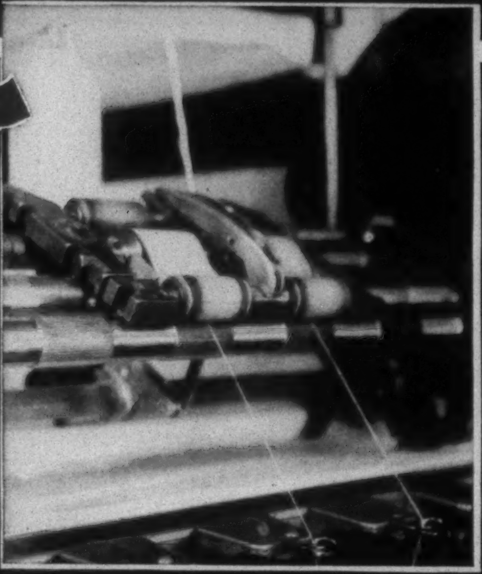
THE MARK OF TECHNICAL EXCELLENCE IN NATURAL AND SYNTHETIC RUBBER

FAMOUS Dayco SYNTHETIC RUBBER PRODUCTS SINCE 1934

H & B Casablancas

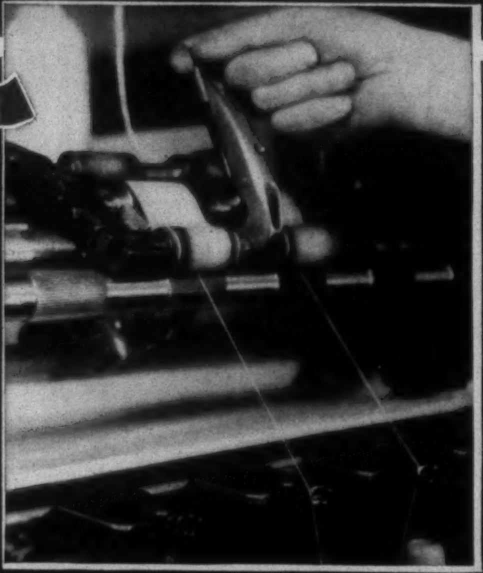
SADDLE AND STIRRUP

1



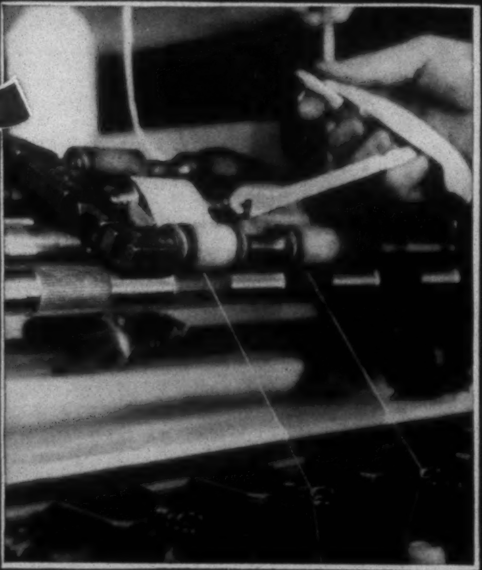
Saddle and stirrup in place, [illegible] single boss.

2



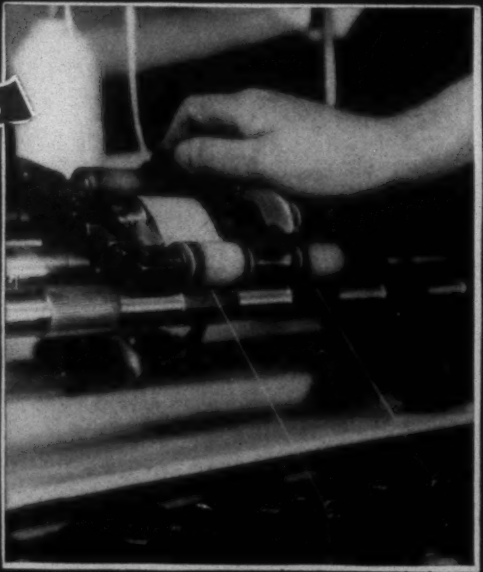
[illegible] which automatically [illegible]

3



[illegible] unhooks itself from spring weight.

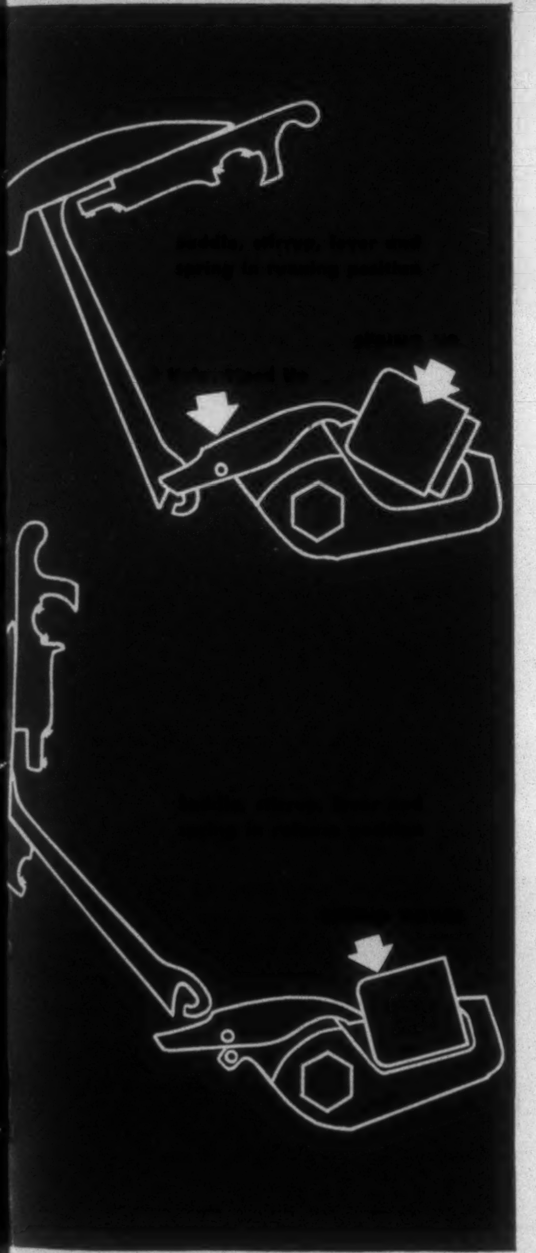
4



When [illegible] saddle is hooked over back roll and then pressed down in front, at which time the spring automatically [illegible] position.

H & B AMERICAN

QUICKLY REMOVED AND REPLACED



THE photographs and captions herewith illustrate how easy and quick it is to remove and replace saddles on H & B Casablancas spinning frames.

This of course is only one of the unique features of the H & B Casablancas Automatic Weighting System. Another is the automatic spring weighting mechanism.

With the conventional stirrup and lever-screw weighting system the amount of weight exerted at the stirrup varies with the angle of the lever to the stirrup. Furthermore, since the ratio between the weight on the lever and the weight exerted at the stirrup is 10 to 1, any increase or decrease in weight caused by a change in the angle of the lever is multiplied 10 times at the stirrup. For example an angle and weight which will give 4 lbs. on the lever will give about 40 lbs. at the stirrup, while an angle and weight which will give 5 lbs. on the lever will give about 50 lbs. on the stirrup, — an increase of 10 lbs. at the stirrup for every pound added at the lever.

In ordinary mill practice levers are seldom all adjusted at the same angle and the variations in weighting that occur because of this fact are greatly magnified at the point of effectiveness. This naturally results in very uneven spinning.

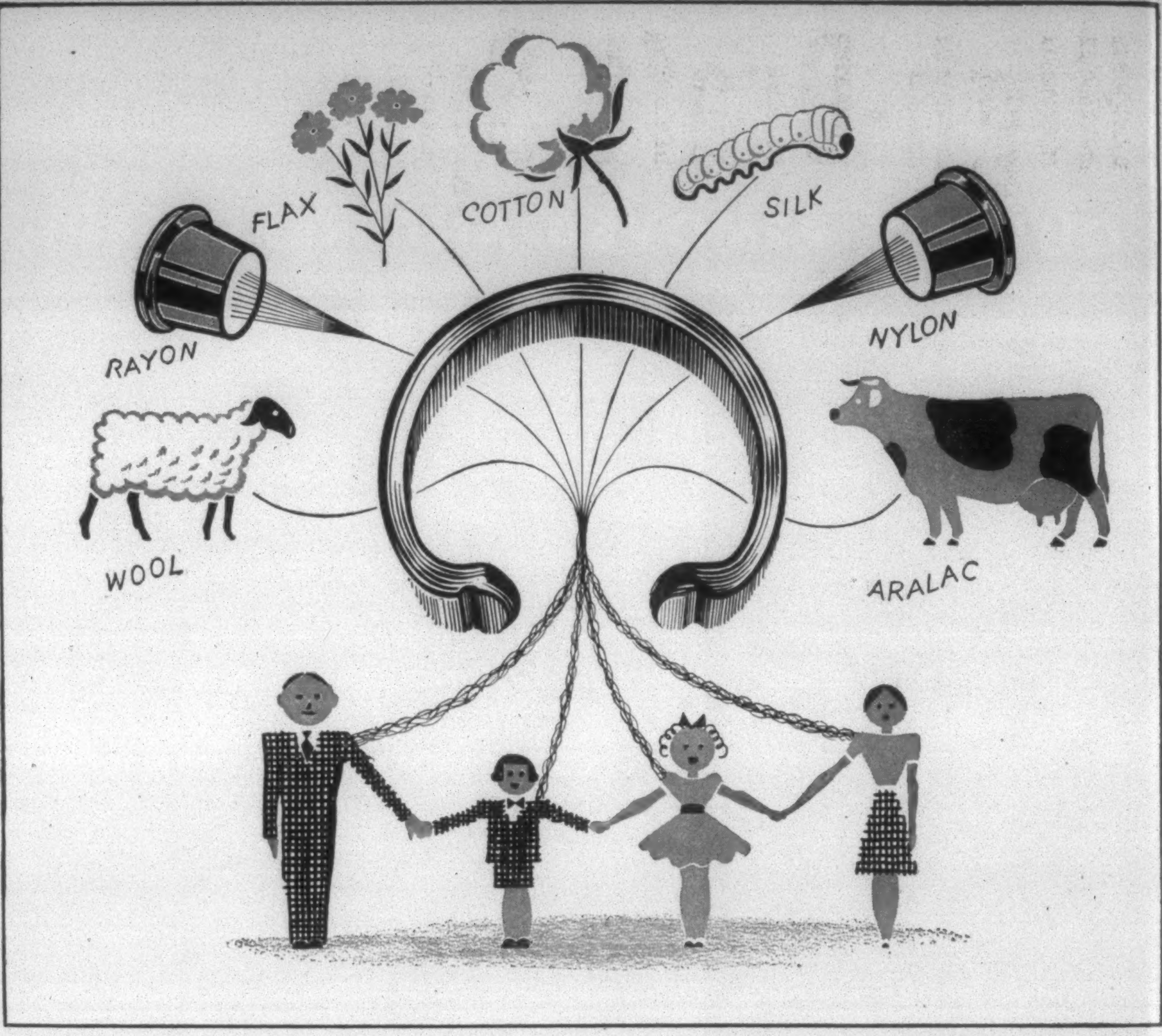
With the H & B Casablancas Automatic Weighting System, on the other hand, any variations in spring tension on the lever are DIVIDED (not multiplied) by 2.72. For example a 100 lb. spring on the lever gives 37 lbs. of weight on the stirrup while a 101 lb. spring on the lever gives 37.4 lbs., — only a fraction of a pound increase. Thus variations in weighting from one set of rolls to the next are minimized and uneven spinning is greatly reduced.

Further information on request

MACHINE CO.

PAWTUCKET, R. I., U. S. A.

***ATLANTA OFFICE:* 815 Citizens & Southern National Bank Bldg.; *CHARLOTTE OFFICE:* 1201-3 Johnston Bldg.; *CANADIAN REP.:* Rudel Machinery Company, Ltd., Textile Division, Montreal and Toronto.**



Guiding every new Blend to a Better Fabric

WHATEVER blend is specified – and new ones are dreamed up almost daily – there are Victor Travelers that will make its spinning or twisting more trouble-free, more certain to result in top-quality yarn.

No book can supply the information you want on handling blends . . . things happen too fast. But there's help; plenty of help for you in the notes on every new blend the Victor Service Engineer has in his briefcase – and even more help "under his hat".

It's information you could assemble – if you had the time to cover the territory he travels. Since you haven't, why not talk to a Victor man, and bring your I.Q. on blend spinning and twisting up to the minute?

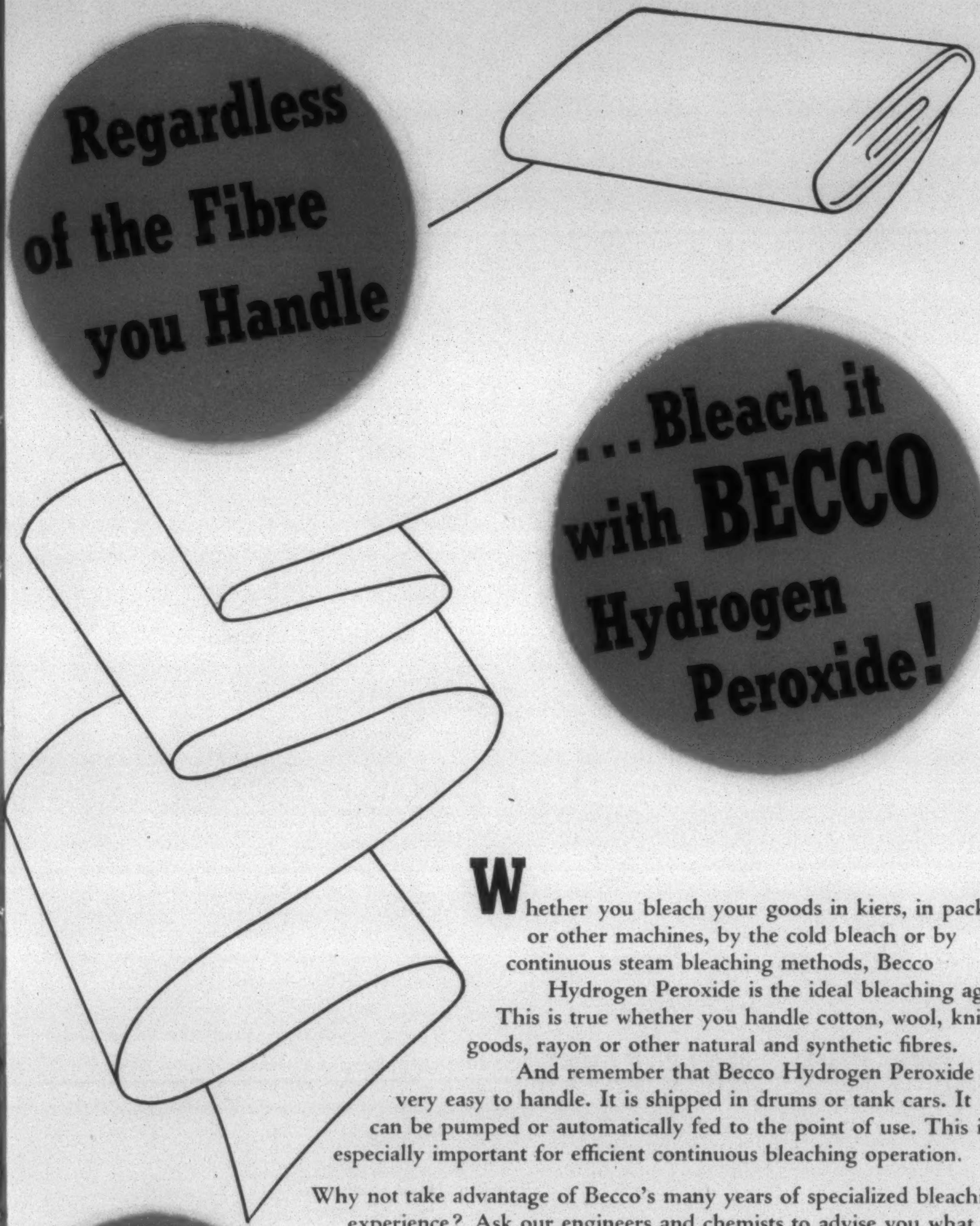
Make sure you are getting the most and the best from your frames, whether you are running blends, straight synthetics, or conventional fibers. Write, wire, or phone, and a Victor Service Engineer will call promptly.

Keep a Step ahead with

VICTOR Ring Travelers

VICTOR RING TRAVELER COMPANY

PROVIDENCE, R. I. . . . . 20 Mathewson St. . . . . Tel. Dexter 0737
GASTONIA, N. C. . . . . . . 173 W. Franklin Ave. . . . . . . Tel. 247



Regardless of the Fibre you Handle

. . . Bleach it with BECCO Hydrogen Peroxide!

Whether you bleach your goods in kiers, in package or other machines, by the cold bleach or by continuous steam bleaching methods, Becco Hydrogen Peroxide is the ideal bleaching agent. This is true whether you handle cotton, wool, knit goods, rayon or other natural and synthetic fibres. And remember that Becco Hydrogen Peroxide is very easy to handle. It is shipped in drums or tank cars. It can be pumped or automatically fed to the point of use. This is especially important for efficient continuous bleaching operation.

Why not take advantage of Becco's many years of specialized bleaching experience? Ask our engineers and chemists to advise you what system is most suitable for processing your goods, regardless of the type of fibre used. This bleaching "know-how" can now be yours, free. Write to

BECCO

BECCO SALES CORPORATION

AGENTS FOR BUFFALO ELECTRO-CHEMICAL CO., INC.

12 Sawyer Avenue, Buffalo 7, N. Y.

New York Boston Philadelphia Chicago Charlotte

PARTY LINE—1946 STYLE

JUST pick up your microphone and talk. You can reach any man or every man in your plant, instantly.

That's RCA Industrial Sound. No man can "get lost"—no emergency can exist long for want of a maintenance crew—no general announcement can escape attention—if you have RCA Sound on the job. Because you can get your message into circulation *as fast as you can talk.*

RCA representatives do a real job when they engineer a sound installation for you. Volume levels are right. Capacity is ample. Speakers are correctly placed. That's because these engineers know—from experience as well as training—what is required.

RCA sound systems are coordinating production; expediting maintenance; issuing instructions and emergency signals; calling meetings; finding men in hard-to-get-at places—in plants all over the country.

Factory music, too . . .

You can plan your new RCA sound system—or convert your present one—to provide music for your workers. Tests *prove* that music relieves nervous tension, helps overcome that mid-afternoon slump, makes happier workers, cuts down on petty ailments, such as those caused by "jangled nerves."

For complete information

A new booklet, "RCA Sound Systems," will be sent to you, without obligation. Write to your RCA distributor, whose address appears below. Inquiries from states other than those listed should be directed to: Dept. 68-5, Radio Corporation of America, 530 Citizens and Southern Bank Building, Atlanta, Ga.

RCA SOUND SYSTEMS

SOUTHERN RADIO CORPORATION
1201 West Morehead St., Charlotte, North Car.
distributor for North and South Carolina

THE YANCEY COMPANY, INC.
340 W. Peachtree Street, N. W., Atlanta 3, Ga.
distributor for Georgia, Alabama, & Tennessee

Cherokee Mills
known the world over . . . uses

LAWRENCE SPINNA CALF

A. C. LAWRENCE LEATHER CO.
TEXTILE LEATHER
PEABODY MASS.

. . . the most generally used calfskin

For fine spinning no other roll covering material takes the place of calfskin . . . and among those mills that have built a reputation for quality, Lawrence's Spinna Calf is the brand most generally used . . . Spinna Calf has exactly the right surface for smooth, sure drafting. It is non-sweating. It holds its shape and "body". It can be depended upon for unvarying quality. Tell your roll coverer you want Spinna—preferred by so many of the quality spinners . . . A. C. Lawrence Leather Company, Peabody, Mass., manufacturer of Lawrence Calfskins—*1st choice for aprons.* Represented by H. H. Hersey, Greenville, South Carolina.

EVERY YEAR MORE PEOPLE DECIDE LEATHER IS BEST

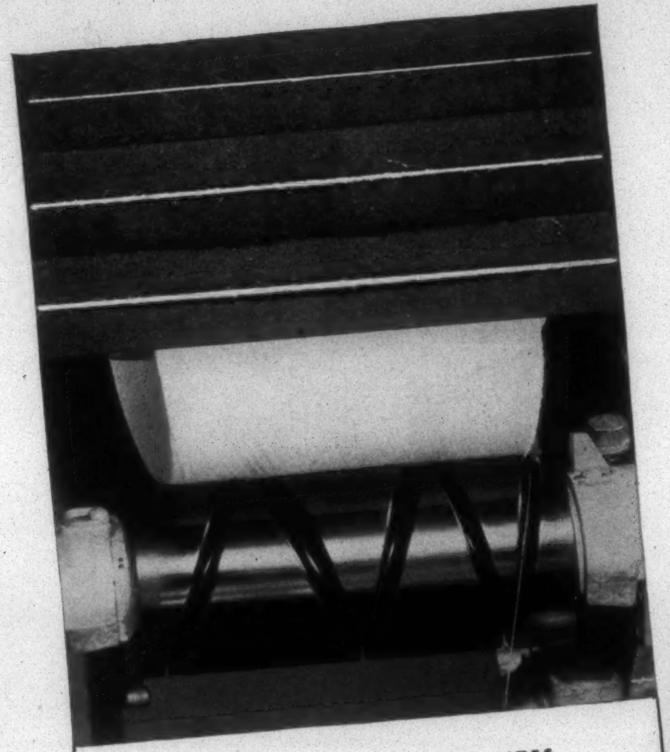
More Cones From Your Winding Room More Compliments From Your Customers

The Roto-Coner* gives you greater production, and Roto-Cones give your knitting mill customers better performance.

The machine's higher winding speed, ease of operation, and freedom from breakdown lower your cost of winding. The superiority of the cones, as measured in terms of fewer press-offs, creates customer satisfaction.

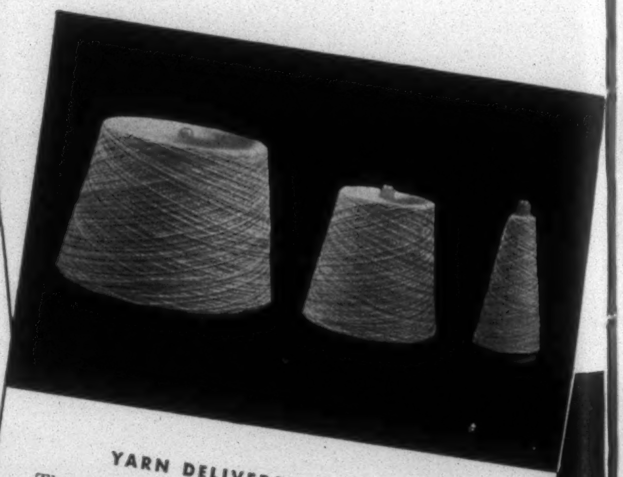
Write for Bulletin 144, addressing Universal Winding Company, at Providence, Boston, Philadelphia, Utica, Charlotte, Atlanta, Chicago, Los Angeles, Montreal or Hamilton.

*Reg. U. S. Pat. Off.



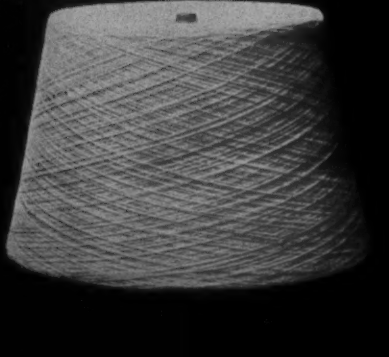
ONE SPEED FOR ALL YARN SIZES

The Roto-Coner's* exclusive method of driving the package and traversing the yarn eliminates the disadvantage of cams, with their speed limitations. Paper cones are wound at 550 yards per minute, and there is no need to slow down the machine when winding coarser counts. One standard groove arrangement gives a minimum number of winds for all sizes — no adjustments needed, no danger of inequalities from spindle to spindle.



YARN DELIVERS MORE EASILY

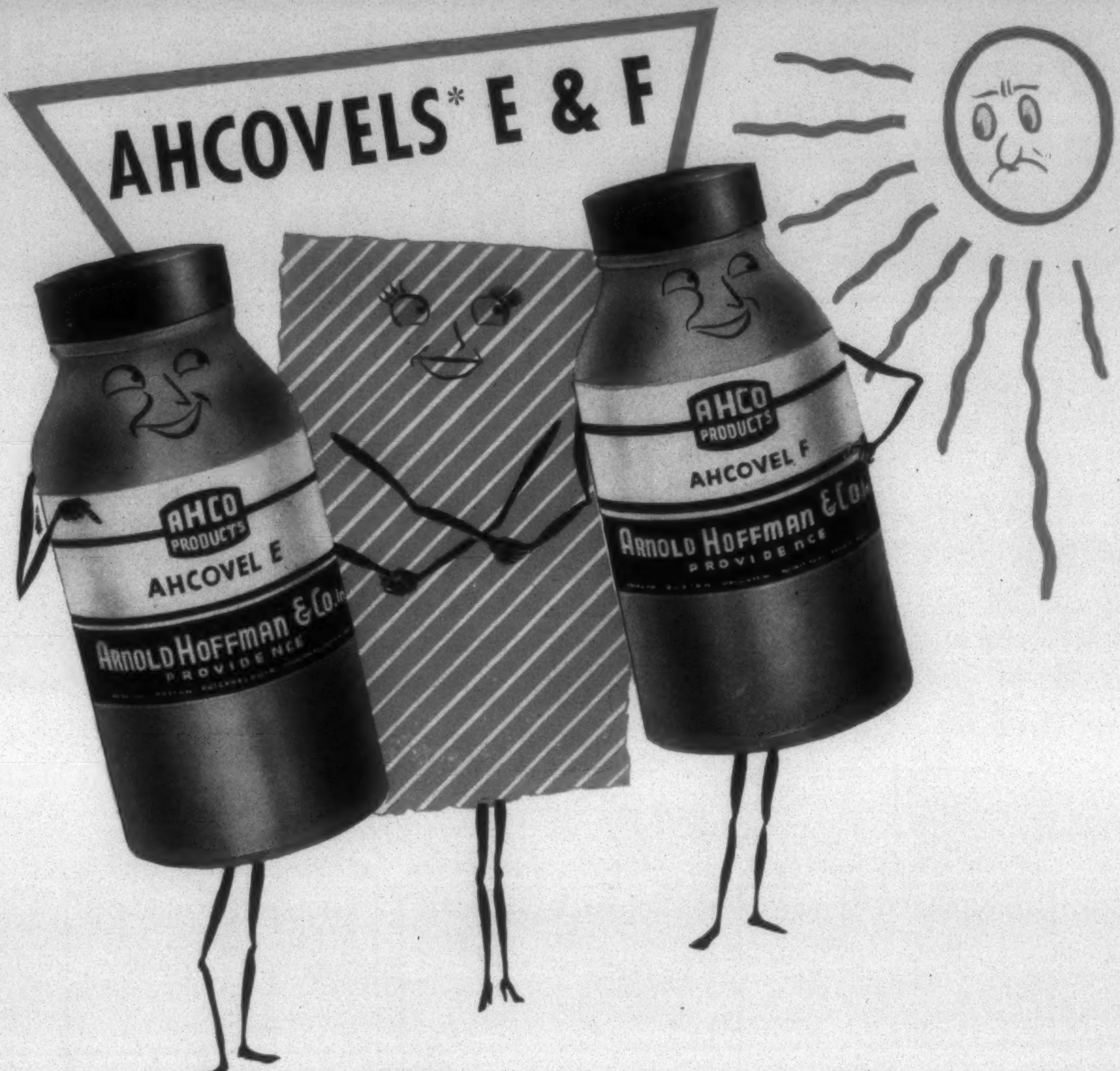
The lay of yarn on Roto-Cones is steep-angled at all diameters for free delivery. Stitches at the base end are eliminated by the quick reversal of yarn at the ends of the traverse which prevents piling up. The yarn is free from roll cuts, because the Roto-Coner* has no slip drums to nip the yarn, and contains no roughed yarn, because the Rotary Traverse revolves in the same direction as the yarn.



ROTO-CONER* LEESONA REG. U. S. PAT OFF

Open-Wind Cones for Knitting

WARPING CONES • DYEING PACKAGES • PARALLEL TUBES FOR TWISTING



Obtain Maximum Light Fastness from Your Colors

Almost all substantive, or cationic, softeners change the shade of dyestuffs on fabrics and seriously reduce their fastness to sunlight. Not so with Ahcovels E and F however. They do NOT alter shades and do NOT affect the relative light fastness of any dyestuff.

Yet they both have these valuable additional properties:—

1. Give velvety soft finish.
2. Resistant to repeated washings and dry cleansings.
3. White paste products, producing non-greasy, odorless finish, which will not discolor or develop odor with heat, age or light.
4. Easy to apply; exceptionally economical to use.

AHCOVEL-E

— was originally developed for hard twisted fabrics, where good draping qualities are normally difficult to obtain — such as hard twist acetates and nylons. It flexibilizes the fibres.

*Trademark Reg. Patented

ARNOLD, HOFFMAN & CO., INC.
MANUFACTURING CHEMISTS
PROVIDENCE, RHODE ISLAND
ESTABLISHED 1815 • PLANTS AT DIGHTON, MASS. & CHARLOTTE, N. C.
NEW YORK BOSTON PHILADELPHIA CHARLOTTE

COMPLETELY INTEGRATED OPERATION

ISELIN-JEFFERSON

OFFERS PLANNED

MERCHANDISING

FOR MILL ACCOUNT ONLY

GREY CLOTH

INDUSTRIAL USERS
CONVERTERS

FINISHED CLOTH

WHOLESALERS—CHAINS
DEPARTMENT STORES
CUTTERS

(HOUSEHOLD)
FABRICATED ARTICLES

WHOLESALERS—JOBBERS
DEPARTMENT STORES
CHAINS

Nation-wide distribution

CHICAGO • BOSTON • ATLANTA • PHILADELPHIA • ST. LOUIS • NEW YORK

—DIRECT ACCESS TO WORLD MARKETS—
through our Export Department

A Great Textile Selling Organization

ISELIN-JEFFERSON
COMPANY, INC.

90 WORTH STREET, NEW YORK CITY
William Iselin & Co., Inc., Factors

Houghton announces

HOUGHTO-Wax

. . . for improved warp sizing

SMOOTHER WARPS . . .

STRONGER WARPS . . .

LESS STARCH REQUIRED . . .

Here is a simple addition to your present warp size formula which will improve both sizing and weaving.

It's HOUGHTO-WAX, a special amorphous wax compound. Added on the basis of three pounds to one hundred pounds of starch, it makes a good size better in several ways.

You will get a *smoother* warp, a *stronger* warp, and a warp which still is flexible and elastic.

There's a saving in starch, too, which is vitally important these days. Reports from mills using Houghto-Wax indicate that the amount of starch may be reduced as much as 20%.

HOUGHTO-WAX is a real size builder. Use it with our Houghto-Size softener for an excellent sizing mixture.

Why not try it, now? Write us for a quantity for tests in your own mill.

E. F. HOUGHTON & CO.

303 W. Lehigh Ave., Phila., Pa.
1305 W. Morehead St., Charlotte, N. C.

How to use HOUGHTO-WAX

Houghto-Wax is now supplied in one-pound blocks, packed 100 to a case, ready to use without need of weighing. Add three pounds to each 100 pounds of starch in your regular size formula, and compare results!

"BOUND TO GET THERE"

Boxed, Bundled or Baled!

. . . WITH *Acme Steelstrap*

No matter how your textile product goes, it will move more secure against everyday shipping hazards when banded with Acme Steelstrap.

You save, too, on warehousing space, shipping weight, dunnage, freight claims . . . and profits rise proportionately.

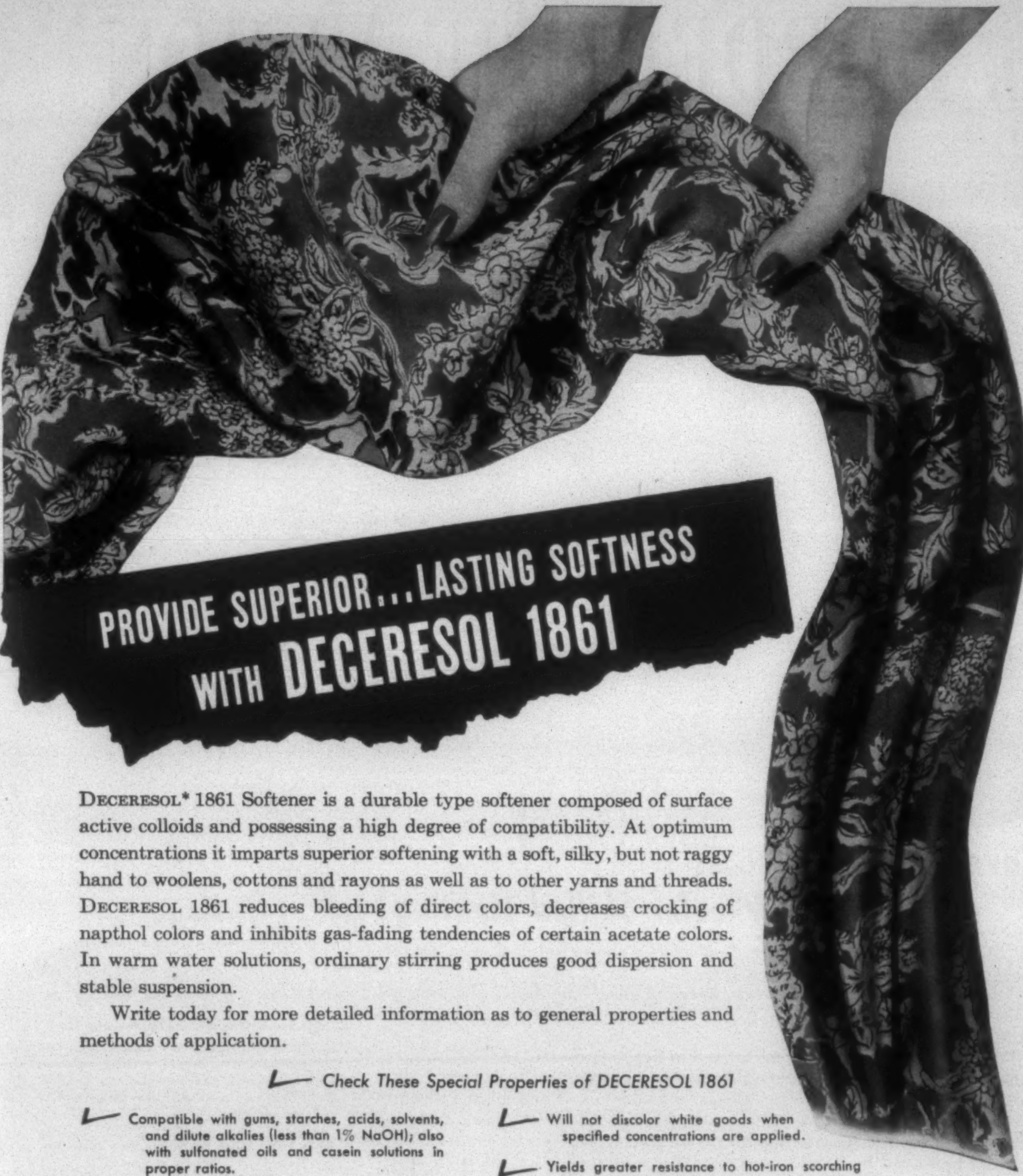
So, whether your textile shipments are single units, carloads of freight, or ships' cargoes . . . use Acme Steelstrap for boxing, bundling, or baling. It means the most efficient shipping pack.

REG. U. S. PAT. OFF.

NEW YORK 17 ATLANTA CHICAGO 8 LOS ANGELES 11

ACME STEEL COMPANY

ACME STEEL CO.
CHICAGO



PROVIDE SUPERIOR...LASTING SOFTNESS WITH DECERESOL 1861

DECERESOL* 1861 Softener is a durable type softener composed of surface active colloids and possessing a high degree of compatibility. At optimum concentrations it imparts superior softening with a soft, silky, but not raggy hand to woolens, cottons and rayons as well as to other yarns and threads. DECERESOL 1861 reduces bleeding of direct colors, decreases crocking of napthol colors and inhibits gas-fading tendencies of certain acetate colors. In warm water solutions, ordinary stirring produces good dispersion and stable suspension.

Write today for more detailed information as to general properties and methods of application.

✓ *Check These Special Properties of DECERESOL 1861*

- ✓ Compatible with gums, starches, acids, solvents, and dilute alkalies (less than 1% NaOH); also with sulfonated oils and casein solutions in proper ratios.
- ✓ Excellent for yarns, fabrics and for knit goods where maximum elasticity is desired.
- ✓ Retains softening properties after repeated washing, dry cleaning of fabric.
- ✓ Will not discolor white goods when specified concentrations are applied.
- ✓ Yields greater resistance to hot-iron scorching than many cationic softeners.
- ✓ Will not develop odors on goods. White goods will not retain chlorine after bleaching.
- ✓ Possesses wetting ability, normally making use of additional wetting agent unnecessary.

AMONG CYANAMID PRODUCTS FOR THE TEXTILE INDUSTRY ARE... Penetrants, Softeners, Finishes, Sizing Compounds, DECERESOL* OT Wetting Agents, PARAMUL 115 Water Repellent, and other Specialties and Heavy Chemicals**

**Reg. U. S. Pat. Off. **Trade-Mark*

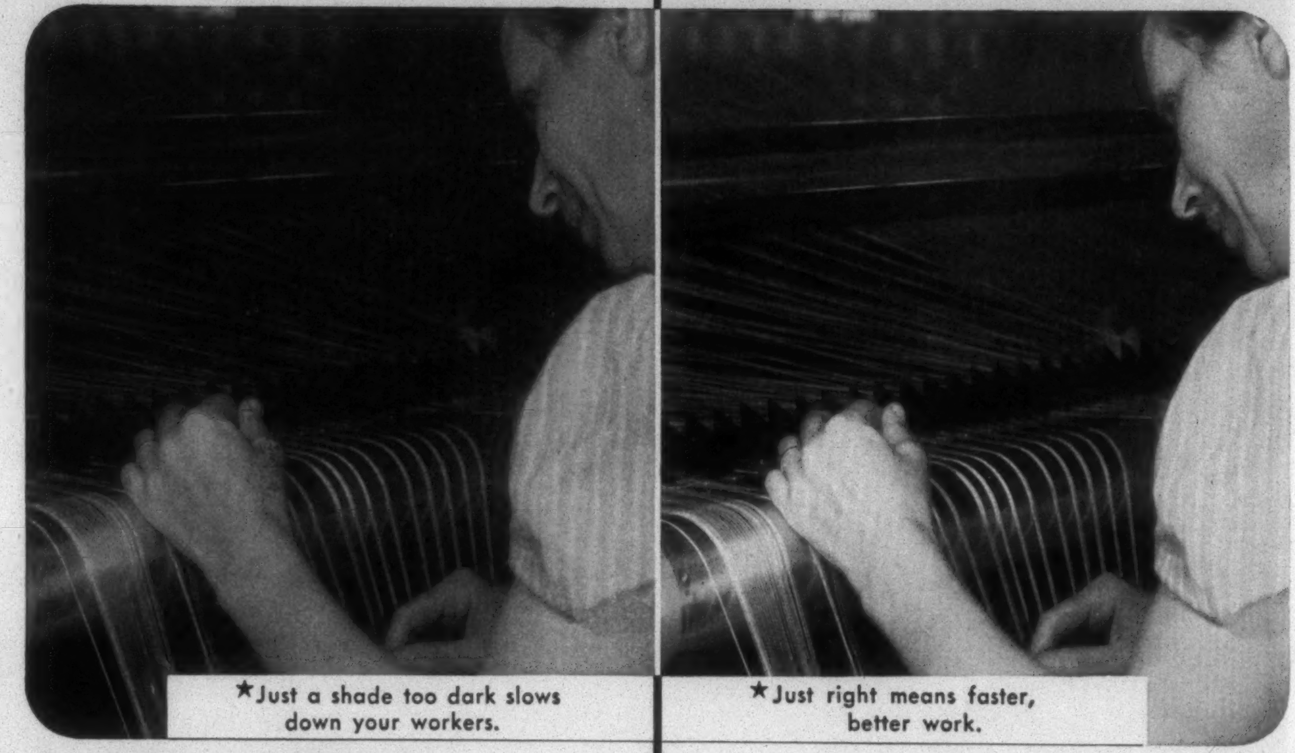
American Cyanamid & Chemical Corporation

(A UNIT OF AMERICAN CYANAMID COMPANY)

30 ROCKEFELLER PLAZA · NEW YORK 20, N. Y.

Is BORDERLINE VISION*

Stealing Production Time?


*Just a shade too dark slows down your workers.

*Just right means faster, better work.

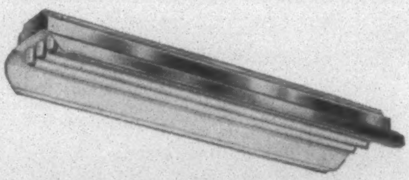
Save Wasted Minutes With Wheeler Skilled Lighting!

"Borderline Vision" – lighting that's just a shade too dark may be robbing you of precious production time . . .

The time it takes a worker to take a second look. The time – and money – it costs you if work isn't just right. The little slow-downs that add up to an expensive lag in production.

For 65 years Wheeler has specialized in light engineering that eliminates such Borderline Vision. Wheeler Reflectors are designed to *control* light – to put light to work where it belongs – on the job. Their high reflection factor gets top illumination from standard lamps. And their rugged, porcelain-enamel coated construction means longer service – easier maintenance.

Don't be fooled by a lighting system that may look all right at a glance. Better, faster work is almost automatic when you install Wheeler Skilled Lighting. Write for full details on the complete line of Wheeler Fluorescent and Incandescent Reflectors now! **Wheeler Reflector Company, 275 Congress St., Boston 10, Mass.** Representatives in New York and principal cities.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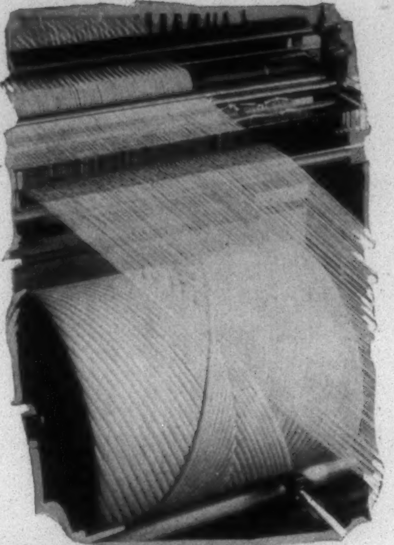

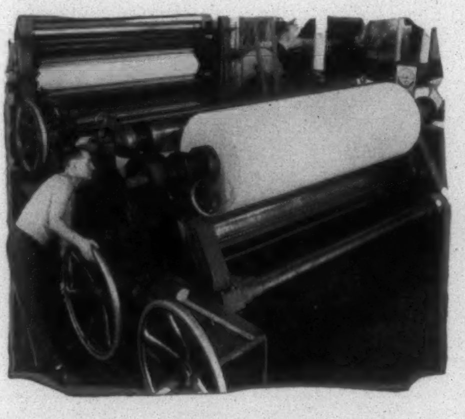

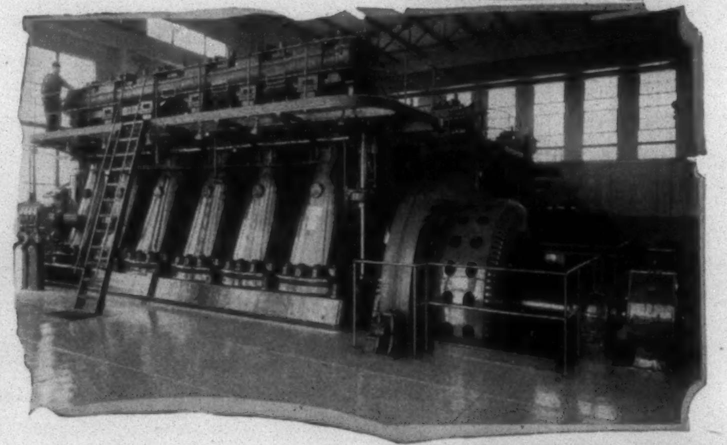

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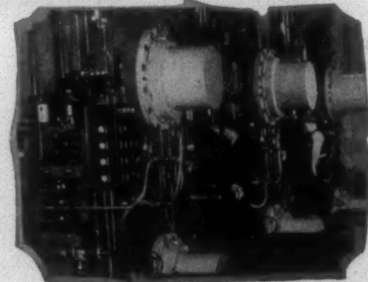

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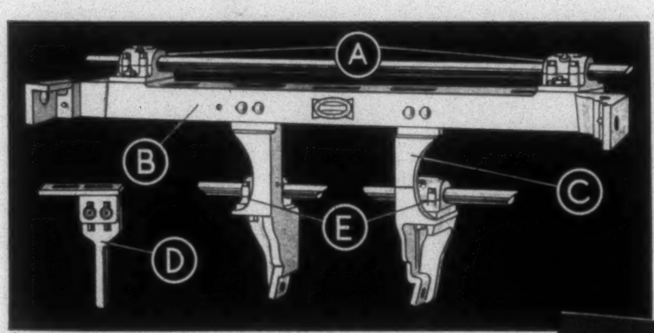

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textile bulletin

Vol. 70 July 15, 1946 No. 10

Textile Wastes and Stream Sanitation

By R. E. STIEMKE, Sanitary Engineer
North Carolina State Board of Health

WIDESPREAD interest in stream pollution abatement throughout the country draws particular attention to dyeing, mercerizing, wool scouring and synthetic fiber manufacturing plants in the Southern states. Progressive industrialists and manufacturers as well as officials of interested state and Federal agencies recognize the need for a fair, practical policy regarding the disposal of liquid wastes, both municipal domestic sewage and trade wastes. With many of the streams already loaded considerably beyond their capacities for handling these wastes and with the expected development and expansion of industries within these states, it is imperative that common-sense control measures be adopted as soon as possible.

Many states have recently adopted water control laws. Virginia, Pennsylvania, Ohio and California are a few of these. Others, such as Tennessee, have established tentative minimum acceptable stream standards and legislation is pending. In some instances individual states or groups of states, in co-operation with industries and municipalities, have been successfully administering stream sanitation policies for as long as 20 years.

It is generally recognized that in many instances, at least, stream pollution is an interstate problem. For this reason and by virtue of the Interstate Quarantine Regulations and others, the Federal Government is interested, and appropriate Federal legislation is pending. A bill, H. R. 6024, known as the "Water Pollution Control Act," has been passed by the House Committee on Rivers and Harbors, to which it was referred, and is before the Congress at this time. It is inevitable that this bill, or one similar to it, will be passed by Congress shortly. It appears to have the support of those groups interested in the desirable industrial development of the nation as well as those whose chief interest is the conservation of our natural resources. This bill provides for grants-in-aid or loans to states in commencing, continuing or extending stream sanitation programs, but leaves the responsibility for control in the hands of state and local governmental units where it properly belongs. Only after interstate, state and local authorities have been afforded ample opportunity during which to prevent or abate a nuisance will action be brought in the name of the United States.

Industry in general, recognizing the merits and necessities of such programs, seems ready to co-operate with regulatory agencies to the fullest extent. Many textile mills have already of their own volition constructed works for the treatment of dye and other wastes. State and local authorities owe it to industry in the spirit of fair play and co-operation to formulate a definite policy and abide by it. Only in that way can new industries or existing industries planning expansion know what will be required of them so that they can plan accordingly. In North Carolina are located a great many textile plants. That state is working toward a policy of co-operation with industry rather than an iron-fisted control of industry. It is believed that the former will accomplish results of lasting benefit in a much more desirable manner. Accordingly, this state's board of health and department of conservation and development were successful in causing the 1945 North Carolina General Assembly to create what is known as the State Stream Sanitation and Conservation Committee. This committee is composed of 16 members, of whom seven represent types of industries contributing industrial wastes to streams or sewerage systems, three represent municipalities discharging sewage to streams, and six represent state agencies. By this representation it is obvious that a spirit of co-operation exists, and industry knows it is being treated fairly.

The official representative of the textile industry on the North Carolina State Stream Sanitation and Conservation Committee is John C. Roberts, secretary-treasurer of Textiles, Inc., Gastonia, N. C. In addition, William P. Saunders, who officially represents "industry at large," is vice-president and manager of Robbins (N. C.) Cloth Mills, Inc., and the Mid-State Cloth Mills at Red Springs, N. C. Both of these textile representatives are active members of the committee, and it is through their efforts and those of others like them that a sound co-operative policy will result in North Carolina. J. M. Jarrett, director of the sanitary engineering division of the State Board of Health, is the chairman of the committee.

The task assigned to the committee is outlined as follows: (1) Locate and study instances of stream pollution tending to impair the best usage of streams; it is recognized that the ultimate disposal of liquid wastes, both municipal and industrial, is a legitimate use of streams; (2) Determine the nature and circumstances of the pollution; (3) Determine in general detail the technical and economic feasibility of remedying or improving the

(Continued on Page 63)

Patents and Rights to Inventions

By H. S. SILVER and W. C. SEALEY in Allis-Chalmers Electrical Review

THE comic strip standard selling price for a patent is $1,000,000. Assuming the average cost of obtaining a patent to be $500, this would represent a 2,000 to one return on the original investment. Few patents have been worth a million dollars, and a great percentage of the approximately 2,400,000 patents issued by the United States Patent Office have failed to provide a monetary return sufficient to defray the cost of obtaining the patent. An invention often is made during the solution of a problem and starts with an idea for doing something new or doing something old in a new way, often without the inventor realizing that invention is involved. If and when the inventor realizes that he may have made an invention, the possibility of obtaining patent or other protection interests him.

Economics is a first consideration in determining the desirability of patent protection. Again assuming the cost of obtaining a patent to be $500, will the right to exclude others from using the invention be worth $500? The correct answer to this question involves consideration of the extent of the use of the invention during the possible protection period; that is, whether a great many or only a few uses would be made. A further consideration involves the necessity and cost of development of the invention so that it may be commercially successful and the ancillary question necessity of development of a market. Another consideration involves the question of other ways of doing the same job—that is, whether there are other solutions for the problem; and if so, does this invention solve the problem in a cheaper, quicker, or better manner?

Exclusive Rights To Inventions

If the answers to the above questions lead to the decision that exclusive rights to the invention are worth more than the patent cost, steps should be taken to maintain these exclusive rights. Although the value of preventing others from using the invention may not seem to be worth the patent cost, patent protection may still be desirable. The inventor may desire to establish his right to use his invention independently of any patent that another might obtain on a similar invention. One method of maintaining exclusive rights to an invention is to keep the invention secret, the prevention of others from making or using the invention resulting from their lack of "know-how." However, this method is seldom effective for more than a very short period of time, and if and when someone else discovers the secret, the exclusive rights vanish.

The better and more usual method of providing exclusive rights is to obtain patent protection. First step in obtaining patent protection is to record the conception of the invention, preferably by writing a description of the device and its operation, illustrated by sketches if helpful, and by disclosing the invention of others. The description and the sketches should be signed, dated and witnessed, with the date of witnessing. And the next desirable step is to diligently complete the invention. Completing the invention, in the technical patent sense, is effected by reducing the invention to practice, and actual reduction to practice is effected by embodying the invention in a full size device and operating it successfully under conditions similar to those to which it would normally be subjected. The filing of a patent application including patentable subject matter is considered a constructive reduction to practice.

Patent Application Procedure

At any time after conception of the invention, the inventor will probably desire to consult his patent attorney. Few inventors have the technical knowledge necessary for the skillful preparation of a patent application, and unless the application is skillfully prepared the resulting patent may well lose some or all of its potential commercial value. Before a patent application is filed, the patent attorney may make a search of the art to determine whether similar devices have been disclosed in previously granted patents or other publications, in order to determine whether the probable claims obtainable are worth the cost of the patent. The prior art also serves as a guide in drawing the patent claims.

After the patent application is filed, it is usually left in the hands of the attorney who prosecutes the application in the Patent Office until a patent is issued, or other final action given. If a patent issues, the inventor is granted exclusive rights for a period of 17 years beginning with the date the patent issues. A United States patent gives the inventor exclusive rights only for manufacture, use, and sale in the United States. If exclusive rights in other countries are desired, it is necessary to file patent applications in those countries also. A valid patent can be obtained only if the patent application is filed within one year (two years for patent applications filed prior to Aug. 5, 1940) from the date on which the invention was on sale, was put into public use or described in a patent or printed publication.

A valid patent can be obtained only by the "first" inventor. When two or more individuals independently conceive and complete the same invention, it is necessary to determine which one was "first." The first to *complete* the invention is *presumed* to be the first inventor. However, the matter of diligence between conception of the invention and its reduction to practice or completion may affect this presumption. If a man who first conceived an invention stopped work on it for a period of time before completion and resumed work only after a later conceiver had completed the same invention, the later man may be determined in an interference proceeding in the Patent Office to be the "first" inventor so far as the right to a patent is

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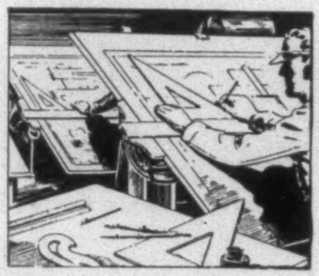
concerned. If the first man could prove diligence in working toward completion of his invention, from a time just prior to the time the second man entered the field until completion of his (the first man's) invention, the first man would be determined to be the "first" inventor, unless he had abandoned his invention.

The issuance of the patent to an inventor gives him no further right, other than he has, to use his invention. His right to make, use and sell his invention may be limited by prior patents issued to others. The issuance of a patent is no guarantee as to the validity of the claims therein, but the burden of proof is on one who disputes their validity. In other words, the claims of an issued patent are presumed to be valid until proved invalid. The claims of a patent appear in numbered paragraphs describing the forbidden ground on which others may not tread.

A patent owner may transfer rights to his patent by assignment or by granting the exclusive license with a right to sue for past infringement. After such assignment or exclusive license, his rights to make, use or sell apparatus embodying the invention are no greater than those of any other outsider. However, by granting a non-exclusive license, he gives up his right to prevent the licensee from manufacturing, using or selling the device covered by the patent. Such non-exclusive license may be limited to include only a particular class of devices or may be limited territorially. A patent owner may forfeit his right to recover from an infringer by knowingly permitting long-continued infringement of the patent by such infringer, without taking effective action toward stopping it.



Without filing a patent application an inventor may perpetuate the right which he then has to make, use and sell his invention by the doing of some act which will bar others from obtaining a valid patent for such invention. This may be accomplished in either of the following ways: (1) *Public Use*—If the invention is embodied in one or more installations in public use for one year before another files a patent application for such invention, no valid patent can be obtained, and hence such public use would preserve the non-exclusive right which the inventor has to make, use or sell his invention. Of course, such rights being non-exclusive, other persons may similarly make, use, and sell such invention; (2) *Publication*— If the work of embodying the invention in a public use is too great or costly, the same type of protection, as set forth in (1) above, can be obtained by publishing a disclosure of the invention. Such a publication more than one year prior to filing a patent application would bar the grant of a valid patent for the invention. This published disclosure must be sufficiently clear and complete so that any one skilled in the art could make and use the invention. The publication must be a printed one and must be available to the public. In this connection, a publication by a manufacturer for distribution only within his own organization would not bar another inventor from obtaining a valid patent for the invention.

A situation sometimes arises in which one desires to use a structure which effects the same result as obtained by a patented invention, but to do so, without license, would invite a suit for infringement. In such cases, there are several courses open. One of the best ways out of this difficulty is to find a different way of doing the same thing; that is, a way which does not utilize the invention covered by the patent claims. Inventions are often made in this manner. The saying "Necessity is the mother of invention" applies. By the exercise of ingenuity, it is often possible to obtain the desired result in a different or better manner. On the other hand, often an older and patentably free device may be found to be equally good or to serve the purpose better.

Avoiding Patent Claims

In the process of finding different ways to produce a given result, the principle of inversion is sometimes useful, particularly where the resulting effects afford superior advantages. This consists of inverting and interchanging elements of the patented device so that, for example, the moving parts of the patented device become the stationary parts of the modified device and vice versa. It is sometimes possible through this procedure to make a new invention.

Another method of avoiding a patented invention is to design a device that does not include all of the essential elements of the invention covered by the patent claims. In many cases, patent claims have been limited in order to avoid the prior art, and, therefore, avoidance is not too difficult. It is necessary to exclude but one *essential* element of a claimed invention in order to avoid infringement of the claim. An element is not omitted if an equivalent element is substituted in its place. For example, if the patented invention covers the use of copper for the construction of a device and it could be equally well produced in steel, zinc, or any other metal, the invention could not ordinarily be avoided merely by constructing the device of one of the other metals. However, if the use of copper was specifically stated to be a part of the invention because it had peculiar properties which renders the device operative in a particular desired manner not provided by other metals, it might be possible to avoid the patent claims by use of some metal which the art had theretofore considered unsatisfactory. In other words, the inventor is entitled to reasonable latitude, in developing his invention, in the matter of equivalents which could be substituted by any one skilled in the art for the elements of the claimed invention.

Patent claims can be avoided by discovering prior constructions put into public use, or regarding which a disclosure has been published, more than one year (two years if the application was filed before Aug. 5, 1940) prior to the filing date of the application for the patent involved. The usual evidences of such prior art are printed publications, foreign or domestic patents, or the records of manufacturers or others showing public use of the patented device. Such prior publications, patents or public use would bar recovery for infringement even though the claims of the patent are readable on the device used. Sometimes, claims are drawn broadly enough to read on prior art which did not come to the attention

(Continued on Page 65)

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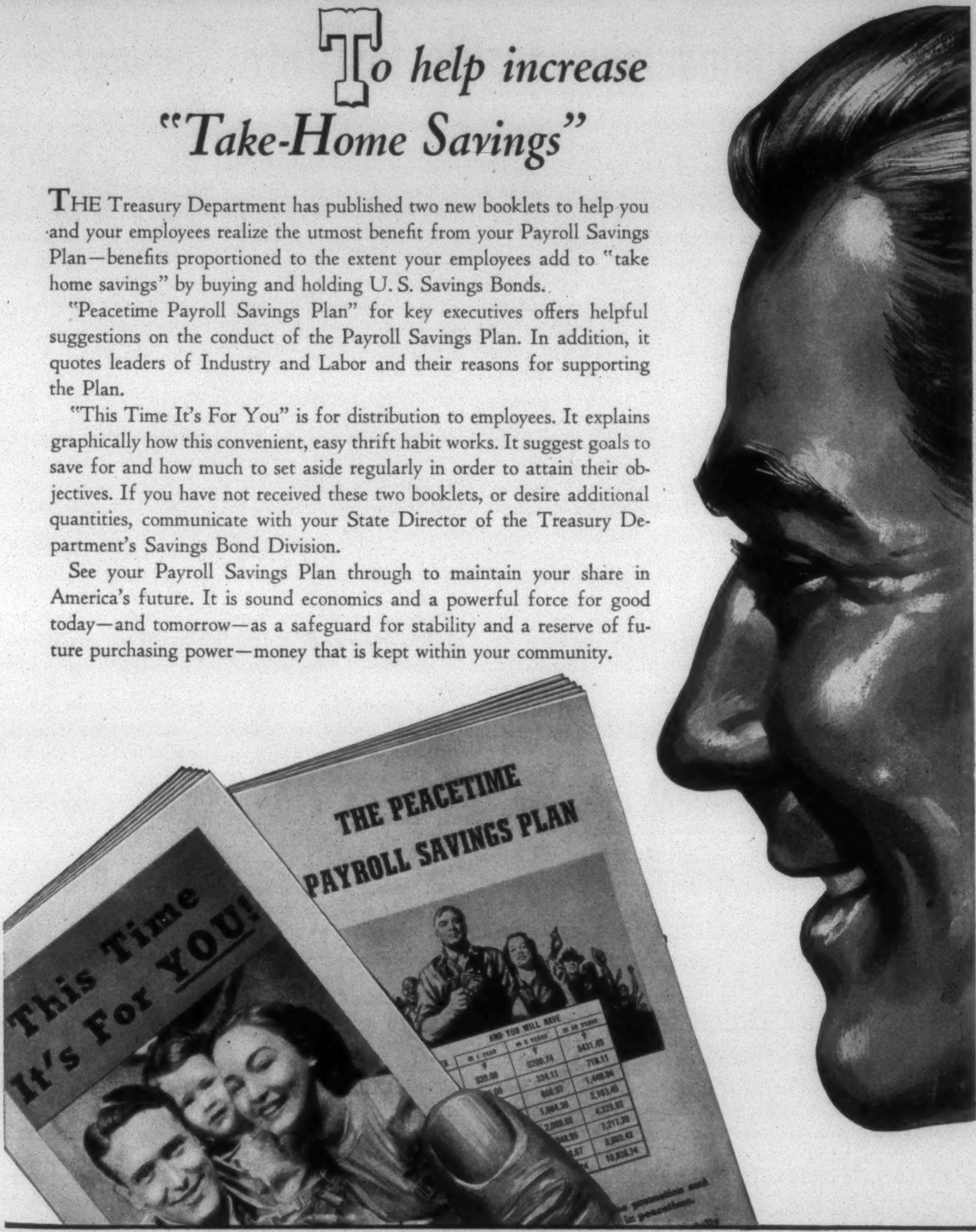
See your Payroll Savings Plan through to maintain your share in America's future. It is sound economics and a powerful force for good today—and tomorrow—as a safeguard for stability and a reserve of future purchasing power—money that is kept within your community.



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The Philadelphia Textile Institute Seminar

ANSWERING the need for an interpretative educational force within the vast field of the textile industry, a need of which the Philadelphia Textile Institute had long been aware, P. T. I. sponsored a four-day National Textile Seminar July 8-12 at Hershey, Pa. Some 100 or more representatives of leading textile manufacturing houses throughout the nation were in attendance at this first seminar. Sessions were under way morning, afternoon and night, with authorities on various textile topics and techniques featured as speakers. M. Earl Heard of West Point Mfg. Co., Shawmut, Ala., served as general chairman of the seminar.

Mr. Heard opened the seminar with a discussion of the necessity of familiarizing the public with the scope of the industry and its importance to the economy of the country. Hugh Comer, president of Avondale Mills, Sylacauga, Ala., who served as seminar chairman for the session on natural fibers, stated that cotton is not fearful of competition and that great progress has been made in making over Southern farmland so that it will yield varied crops, create more employment, bring new wealth, open markets and improve the living standard throughout the area. Presentation on natural fibers were made by Francis L. Gerdes, U. S. Department of Agriculture, Stoneville, Miss., who spoke on cotton; Prof. John L. Hill, University of Wyoming, covering wool; and Dr. Simon Williams, Fabric Research Laboratories, Inc., Boston, Mass., who discussed the bast fibers.

Mr. Comer announced that his mills are working with various blends of fibers, but that he sees cotton a long way from being sold short. The cotton farm in the past failed because of lack of research, he said, but with diversified crops and greater income, this subject will be given greater attention. Mr. Comer exploded the theory that mechanization would mean displacement of workers, stating that with greater wealth, the South could have more employment. "Money makes jobs," he said, adding that economic improvement in the South could be accomplished without injury to any other section of the country, without migrating of industries from other areas.

Mr. Gerdes described the scientific research work being carried on at the Stoneville Experimental Station, and said it has been of immense value both to the grower and to the cotton farmer. Grade and staple are not the only important qualities in cotton, he declared. Length uniformity is another vital factor. As a result of experiments at the station, he said, cotton fibers can be produced to meet specific needs of manufacturers, and that accurate information is available in advance as to the types of cotton that will be produced. At present, said Mr. Gerdes, 75 per cent of the cotton crop is in six varieties, whereas 30 years ago there were about 1,300 varieties which points up the strides that have been made in cotton breeding. Mr. Gerdes pointed out that revolutionary changes have taken place in the ginning industry, which has become highly centralized. In 1946, he said there were under 7,000 gins in this country, whereas in 1931 there were 15,000 gins. Such a reduction tends for greater uniformity of product, he said.

The need for more co-operative research in the development of better wool fibers was emphasized by Mr. Hill, who urged Eastern manufacturers to co-operate with sheep growers in the subject of animal husbandry for wool improvement. He declared that the world's wool supply is likely to be well maintained and that the tendency in the last 30 years has been steadily upward. Mr. Hill pointed out various qualities of wool which stand in its favor, listing: resiliency (because of its makeup of many cells); felting properties; elasticity; insulating value; absorbing qualities; and variability "which makes for a variety of uses." He also stressed the salvage value of wool in that it can be repeatedly reused. Mr. Hill declared wool is indispensable for military operations, citing testimony of Army leaders.

Dr. Joseph Quig of the rayon department, technical division, E. I. du Pont de Nemours & Co., who served as chairman of the session on manufactured fibers, declared that the manufacturers of rayon and synthetic fibers believe they have something to contribute to the organized and united scientific power which must not only be brought into fruition, but maintained, if the entire industry is to keep the primary position which it presently enjoys. "The manufacturer of man-made fibers are committed to the thesis that chemistry and the chemist, together with their sister sciences, scientists and engineers, are vital in attaining that higher standard of living which will be necessary if we are to support higher wages and probable changes in our tariff structure. The limitation in our field is and will be adequately trained men. The power of science in our industry will be no more effective than the standards of the curricula of our textile educational institutions, our teachers, and students who create the background for future industrial discoveries."

Dr. Frederic Bonnet, advisor to the president of American Viscose Corp., discussed rayon yarn and fibers, and Edgar L. Schlesinger, director of product development for United Merchants and Manufacturers, Inc., reported on non-cellulosic fibers.

Addressing the seminar's second day session on yarns, blends and tire cord, Dr. Lewis Larrick of the Institute of Textile Technology declared that the high cost of cotton offers a threat to the continued use of the fiber in the making of tires, and with the current price per pound of cotton tire cord about the same as rayon, manufacturers are desiring to favor rayon since it requires less poundage per tire. Rayon, he said, had proved its worth as a textile com-

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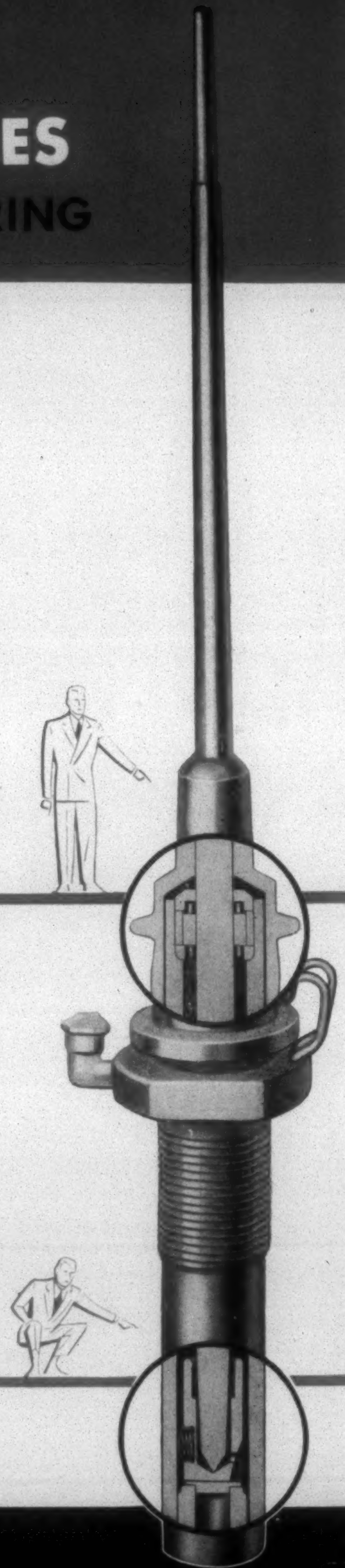


ponent in heavy-duty tires and its continued use is assured. Only limited production facilities of filament rayon yarn prevented tire manufacturers from further expanding their use of the yarn in tires, he said.

H. Gordon Smith, vice-president of the United States Rubber Co., was chairman of session on yarns, blends and tire cord. He stated that the need for research in the industry is very great and urged the channeling of research be directed to specific purposes.

In a discussion of blends, Robert A. Smith of the textile research department of American Viscose Corp. said that a blend is not a mixture of fibers, but an art of putting together two or more fibers of a complimentary nature for the final attainment of desired characteristics. This, he said, requires research. Many new characteristics, qualities, properties can be developed between the origination and fabrication of the yarns, he added.

Confusion of the public by the vast number of blends that textile manufacturers might produce was the expressed fear of Professor Hill. This anxiety was somewhat allayed by other speakers, asserting that the blends that mills would produce would be to serve specific purposes and be better suited for the intended product.

Although rayon has made inroads in certain specific uses such as tire cords and rubber hose, cotton reigns supreme in the industrial fabrics field, stated John F. Hagan of Callaway Mills at the session on fabrics. Carl Taber, head of fabric development, Du Pont acetate division, was chairman of the session. Andrew J. Sokol of J. P. Stevens & Co., discussing fabrics for *(Continued on Page 62)*

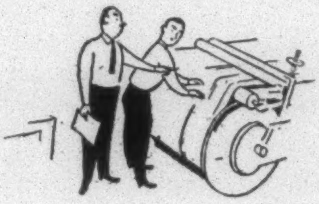
The Shortage of Textile School Graduates

AT least 900 textile school graduates are needed in the industry today, according to results of a survey made recently by William Sewell, a member of the editorial staff of *Textile Forum,* the magazine published by students of the North Carolina State College school of textiles at Raleigh. Based on figures submitted by the ten college-level American textile schools in response to the *Forum* questionnaire, some very interesting conclusions were reached relative to the current need for graduates, and present trends in textile education.

During the pre-war years of 1935 to 1940 the ten institutions graduated an average total of 290 students each 12 months, including both degree and diploma students. Using this figure as a norm, and comparing figures submitted on the number of graduates during the war years, it was found that output of graduates was a mere 15 per cent of normal during the years 1944 and 1945, and that the total graduated in the years 1941 through 1945, plus the estimated number of 1946 graduates, is considerably below normal for the five-year period.

The schools estimated that some 64 men would be graduated last month, about 22 per cent of normal. It also was estimated that 146 would be graduated in 1947, again only about 50 per cent of normal. The total attendance of the schools, as of February, 1946, was 1,342, as compared with a total average yearly attendance from 1935 through 1940 of 1,345. It probably can be stated safely that with increased enrollment in the terms and semesters started since February, that school attendance is now above normal, but even if the schools graduated *double* the normal number, starting with the year 1948, it would still take three years to fill normal requirements.

It is also questionable whether the shortage could be filled in three years even with double the normal number of graduates leaving the schools each year. The demand for textile school graduates has increased greatly as the industry has become increasingly aware of the need for technically trained men. This is evidenced by the organization and support by industry of the various foundations at each of the Southern textile schools, and the more recently organized Philadelphia Textile Institute Foundation and New England Textile Foundation. At the meeting of the National Cotton Congress in Washington in January, the appalling shortage of scientifically trained young men in the field of cotton research was discussed, and measures undertaken to stimulate interest in textile education. All evidence points to an unmistakable trend toward an increased demand in the textile industry for technically trained college men.



A comparison of the total attendance of the 1935-40 period with that of 1946 yields evidence of some interesting trends. It might be said at this point that figures giving the breakdown of students enrolled in textile engineering and/or manufacturing courses and textile chemistry and dyeing courses could not be furnished by all schools, but the figures used were furnished by five of the ten schools, and are probably representative of actual trends. The total enrolled in textile engineering and/or manufacturing courses granting degrees increased from 70 per cent of the total attendance in 1935-40 to 79 per cent of the total in 1946. Enrollment in chemistry and dyeing courses granting degrees was 14.7 per cent of the 1935-40 total atendance, and 11.5 per cent of the present total. The greatest difference is in the attendance of diploma courses, which dropped from 15.3 per cent of the total attendance in the 1935-40 period to less than ten per cent of the present total. In other words, only 62 per cent as many students are enrolled in non-degree courses as formerly. This may be of significance to manufacturers in New England, for those schools which grant diploma courses draw a large percentage of their students from mill workers who attend night schools. The percentage of the total attendance enrolled in degree courses increased from 84.7 in 1935.40 to 90.5 in 1946, indicating a recognition of the need for a college degree as a prerequisite to success in industry.

Recent Developments in Rayon Stabilization

By DR. JACK EPELBERG, Chemical Process Section Superintendent
Research and Development Division, Cluett, Peabody & Co., Inc.

– Before American Association of Textile Technologists –

FOR some time we have been aware of the need for finishing processes to stabilize washable rayon fabrics, i. e. to control the normal tendency of such fabrics to shrink or stretch when laundered. The need is proven by the current widespread consumer dissatisfaction with washable rayons reported by retail stores. A recent nationwide survey shows that washability of all types of fabrics is rated by department stores as the most important single quality desired by customers. That the problem has not been adequately solved is apparent from the keen interest shown by the large rayon manufacturing concerns in new stabilizing processes and the encouragement and co-operation they offer to anyone whose efforts appear to have merit.

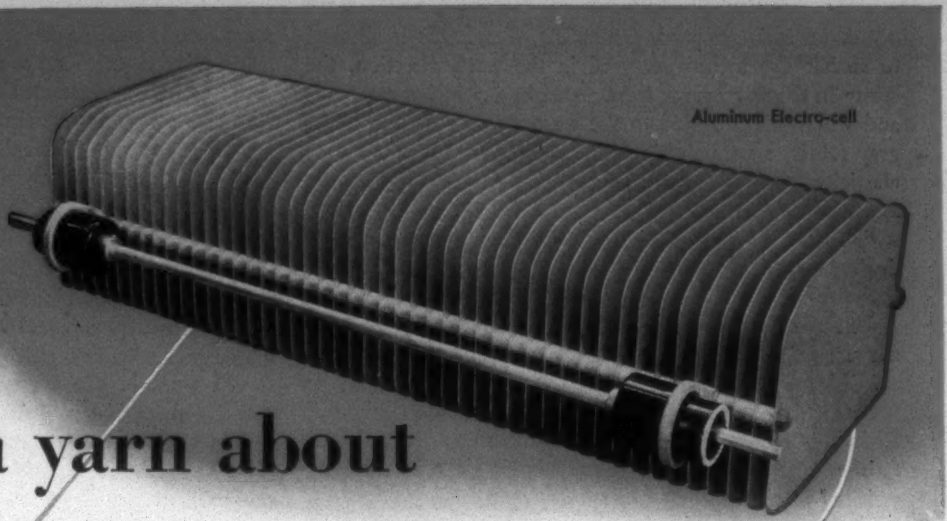
Before narrowing our discussion to the behavior of viscose fabrics on washing, I might point out that there are three broad types of shrinkages as examplified by three typical fabrics—namely, cotton, wool and rayon. Fortunately for us, cotton generally takes all of its shrinkage in the first wash. This type of shrinkage is usually referred to as "relaxation" shrinkage. It is this feature that enables one to pre-determine the potential wash shrinkage of a cotton fabric and compressively shrink it. The potential wash shrinkage of most cottons is not too great. This also is an advantage as it results in a pre-shrunk fabric that is not too stretchy and is stable to continued washing.

Wool, as we are aware, continues to shrink with each succeeding wash. This progressive shrinkage is termed "felting" to differentiate it from relaxation shrinkage. We take advantage of this felting tendency in the manufacture of hats, blankets and other "felts." Rayon, is in a class somewhere between cotton and wool. It has a much greater first wash shrinkage than cotton, and does, moreover, exhibit progressive shrinkage on continued washing either in the laundry or at home. This is a primary characteristic of viscose rayon fabrics, *unless* they are given some finishing treatment specifically designed to eliminate this unserviceable performance.

The excessive first wash shrinkage and the fact that the shrinkage is often progressive makes compressive shrinking inapplicable to such fabrics. One of the prerequisites of obtaining a satisfactory pre-shrunk rayon fabric, as with cotton, is that a fabric must shrink only on the first wash, and not in succeeding washes. Also if it becomes necessary to compressively shrink a fabric too many inches per yard due to the excessive first wash shrinkage, a poor fabric results. Such a fabric will exhibit too much elasticity. Such a "stretchy" fabric is difficult to handle in manufacture; that is, it is not suitable for cutting or sewing and does not have a satisfactory degree of stability in the manufactured garment. We, therefore, conclude that viscose rayon fabrics or blends containing viscose rayon in major proportion must be treated during the finishing processes in such manner that excessive shrinkage as well as progressive shrinkage is eliminated. In order to overcome these difficulties, some plants are first resin treating the rayon fabric to reduce the initial shrinkage and then compressively shrinking the treated fabric. This has not proven completely satisfactory because such a treatment has the disadvantage of imparting too crisp a hand to the fabric. Also such resins tend to hydrolyse on continued washing and usually possess "chlorine retention" properties. This will be more fully discussed later.

We have discussed the effect of the large amount of potential shrinkage of rayon fabrics—now for the cause. We find that viscose fabrics have a large amount of potential shrinkage because of the excessive swelling of the fibers when wet with water or soap solutions, also because of the stretch imparted to the warp yarns during warping, slashing, weaving and wet finishing. Normal viscose rayon fibers show as great as a 45 per cent increase in diameter when completely wet with water, that is, in comparison with the diameter of the dry fibers. The objective of a satisfactory stabilization process for these fabrics can be stated, quite simply, to be the elimination of potential shrinkage and stretchiness in fabrics before the cutting operations, without the introduction of undesirable characteristics of a chemical or physical nature.

A number of methods of stabilizing viscose rayon fabrics have been investigated. The simplest of these is complete is complete relaxation of the fabric of a purely mechanical nature. While shrinkage can be reduced or even eliminated by handling these fabrics in such manner that they are allowed to shrink in the finishing plant, this, of course, even if it were possible, is not stabilization at all, in the true sense. It does not produce satisfactory fabrics in the case of fabrics having a high potential shrinkage, since stretchiness is thereby introduced into the warp of the fabric because of excessive crimp which develops in the warp yarns when the warp is permitted to shrink an excessive amount. It is interesting to note that with most fabrics we find that for every inch per yard of shrinkage occurring in the warp, there is an increase in the crimp of



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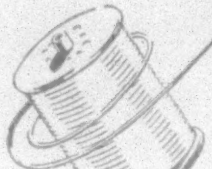

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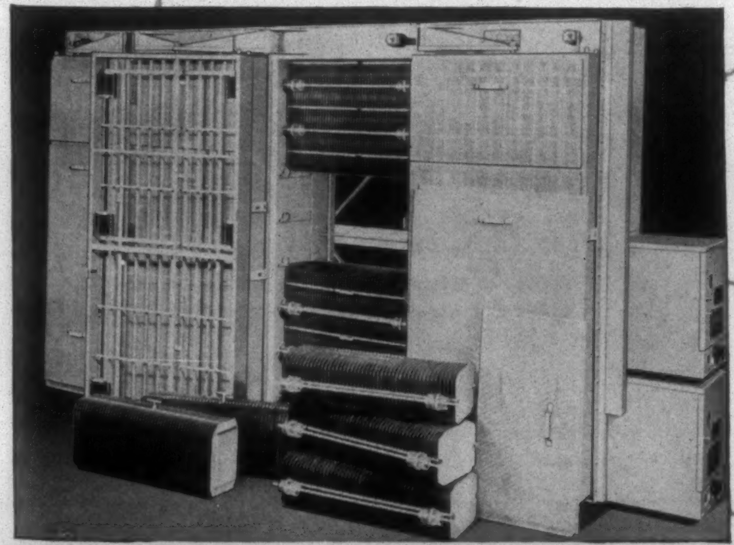

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0.7 of an inch per yard. Therefore, if a fabric is allowed to shrink five inches per yard in the warp direction, the crimp in the warp yarns is increased by 3.5 inches per yard, and when this is added to the warp crimp existing in the gray fabric, a very elastic and stretchy fabric results. Such elasticity produces great difficulty in cutting and sewing, and also produces a garment which is not stabilized, but which may shrink when washed if the fabric is stretched during sewing, or which may stretch or "sag" out of shape if the fabric is not stretched during the sewing operations.

One approach to stabilization of these fabrics consists of the use of "surface finishes," that is finishes which are applied to a fabric, but are incapable of penetrating the fibers, and which might be called "surface fiber finishes." Such finishes are produced by the use of starch, cellulose finishes and polymerized thermoplastic or thermosetting resins. With the use of such surface fiber finishes reduction in shrinkage is due only to stiffening and binding together of yarns and fibers. Such finishes are not satisfactory stabilizing agents because the stabilization is not permanent to multiple washing and the texture and hand of the fabrics are stiffened and changed undesirably in many cases.

Another type of stabilizing finish which has been investigated and practiced could be described as "internal fiber finishes." This covers the treatment of rayon fabrics with aqueous solutions of thermosetting resin pre-condensates, which are condensed or cured *in situ* by a heat treatment. Such finishes are more permanent than the surface finishes since the resins are formed by condensation within the fibers, but we find that this type of finish is still not generally satisfactory because the stabilization is not permanent to washing as performed in the commercial laundry or in the home laundry. With fabrics so treated, the amount of shrinkage obtained on washing will vary with the temperature of the wash water and none of these finishes is entirely permanent to high temperature washing. Moreover, the texture and hand of fabrics with these internal fiber finishes are often unfavorably affected and undesirable properties are produced in the fabric such as the characteristic which has been described as "chlorine retention." By chlorine retention, of course, we mean the chemical absorption of chlorine by a fabric during chlorine bleaching in such manner that the chlorine is not all removed by rinsing and is released in the form of hydrochloric acid during subsequent ironing or pressing to cause either tendering or discoloration.

In view of the foregoing drawbacks to most rayon stabilizing procedures, our people early came to the conclusion that the only satisfactory stabilizing treatments are what may be described as the permanent chemical treatments. These are most satisfactory because the effect is permanent, the hand and texture are unchanged, and with the proper type of process, no undesirable properties are introduced into the fabric. As a result of continuous research work both in the laboratory and in finishing plants since prior to the war, we have developed a stabilization process of the permanent chemical nature for application to fabrics constructed of viscose rayon or predominately of viscose rayon, and in the following discussion we shall explain some of the technical details of this process.

Thinking along these lines, it occurred to us to investigate the class of organic compounds known as "aldehydes" as suitable reagents for stabilizing rayon fabrics. Of the many such compounds under observation, glyoxal was the only one that gave promise. This chemical is the simplest dialdehyde with two aldehyde groups per molecule. Continued work in our laboratory resulted in developing an effective formula and technique for the successful application of glyoxal to accomplish the desired results. By means of this reaction, swelling of the fibers in water or soap solutions is greatly reduced. Actual tests on fibers from properly treated fabrics show only a ten per cent increase in diameter when soaked in water, in comparison with the 45 per cent increase in diameter previously mentioned for untreated fibers. This reduction in swelling is brought about by the substitution of oxyacetylene bridges for hydrophilic hydroxyl groups in the molecular structure. Elimination of the excessive swelling eliminates the major part of the potential shrinkage of the fabric, and the small remaining potential shrinkage is eliminated by mechanically relaxing the fabric.

In practice, the chemical treating solution is a water solution containing glyoxal and acid catalyst. The chemical reaction is accomplished in plant operation by the following procedures. First, the fabric is wetted with the chemical solution to cause the fibers to swell and absorb it. This is accomplished by means of the padder tank or auxiliary immersion tank. Secondly, excess chemical solution is removed from the fabric. Squeezing between the padder rolls is the method used for removing excess chemical solution. Third, moisture is eliminated from the fabric. This is done by drying it on a tenter frame. Fourth, heating or baking the dry fabric to react the glyoxal with the cellulose. This is accomplished by heating the dry fabric in a suitable oven at a definite temperature and for a definite time. Fifth, unreacted chemical and catalyst are removed from the fabric. This is accomplished by washing in soap and soda-ash in a dyebeck, or continuous washer. The essential chemical reaction occurs during the heating or baking operation which is, therefore, the most critical operation.

After the washing operation, the fabrics are slack-dried in order to take up the small amount of potential shrinkage remaining in the fabrics. The fabrics are then steamed on a tenter frame to the proper width. For the evaluation of the laboratory and plant application of this process, we have standardized on the use of the Federal Specification CCC-T-191-a shrinkage test for cotton. We have chosen this rather severe test method since we believe that many spun rayon garments may easily be mistaken for cotton ones and, therefore, be washed at high temperatures. Naturally, we were searching for a stabilizing treatment which would enable rayons to withstand the "everyday wear and tear" of consumer home or power laundry treatment. From the plant viewpoint, in actual production the important factors in obtaining entirely satisfactory results with this process are: the preparation of the fabric, which must be neutral, absorbent and free from any sizing or dyeing assistants;

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satisfactory impregnation with the chemical treating solution; proper curing conditions; and handling the fabric under minimum tension after it has been cured and washed.

The glyoxal process is primarily applicable to viscose or cuprammonium rayons, that is, to regenerated cellulose rayon. It is not as satisfactory on fabrics made of acetate rayon although blends of viscose and acetate rayon can be treated satisfactorily. In this case, the viscose fibers must constitute the major portion of the blend. We do not consider the process satisfactory for fabrics containing cotton because of the sensitivity of cotton fibers to the acid catalyst at elevated temperatures. It is especially applicable to fabrics which are to be finished in white because of the absence of chlorine retention. However, there is a slight yellowing produced on such white fabrics. Fortunately, this yellowing can easily be removed by a slight bleach. It is, therefore, advisable to bleach the fabric after the treatment rather than before. This operation is combined with the slack washing which always follows the treatment.

Recent improvements in the technique of continuous vat dyeing are resulting in a large increase in the yardage of rayon fabrics that are being vat dyed. Having dyed the fabrics fast to washing a satisfactory rayon stabilization process is a "must." In general, this process causes little or no change in shade on vat colors. There is, however, a definite tendency to change many of the direct colors and a proper selection of a suitable range of such colors should be made. In many cases with both direct and vat colors, there is an improvement in light and wash fastness. Consideration also has to be given to the fabric characteristics. Such details as twist, weight, count and type of yarn have to be considered in properly applying the process to obtain satisfactory stabilization.

The process has certain advantages in the finishing plant which we believe are important. These are, the fact that the glyoxal solution, as supplied, is entirely stable in storage and no extraordinary precautions need be taken during storage. Moreover, the chemical treating solution with catalyst added is simple to prepare and offers no special handling problems since it too is stable in storage and can be saved from day to day. The chemical treating solution has practically no odor and very little or no offensive odors are produced during drying or curing of the fabric. The treated fabrics have certain important characteristics which should be mentioned at this point. In the first place, glyoxal stabilization has no stiffening or harshening effect on the hand and texture of the fabric. It can be applied without producing any change in the hand or texture of the fabric because there is no formation of material on the surface of the fibers. Any unreacted glyoxal on the surface of the fibers is removed during the soap washing, after the cure. However, if desired, a firm or even a crisp hand can be produced by adding the appropriate stiffening agent to the treating solution. The stabilization produced by the process is permanent to washing at any temperature. Washing operations do not cause hydrolysis of the reaction product of cellulose and glyoxal which appears to be entirely permanent. No offensive odors can develop in the fabrics themselves due to the fact that no hydrolysis occurs under any storage conditions. Any unreacted glyoxal is removed during washing and the reacted glyoxal becomes a permanent part of the fiber substance. The stabilized fabrics have no chlorine retention properties when chlorine bleached, and thus white and pastel shade fabrics can be safely stabilized.

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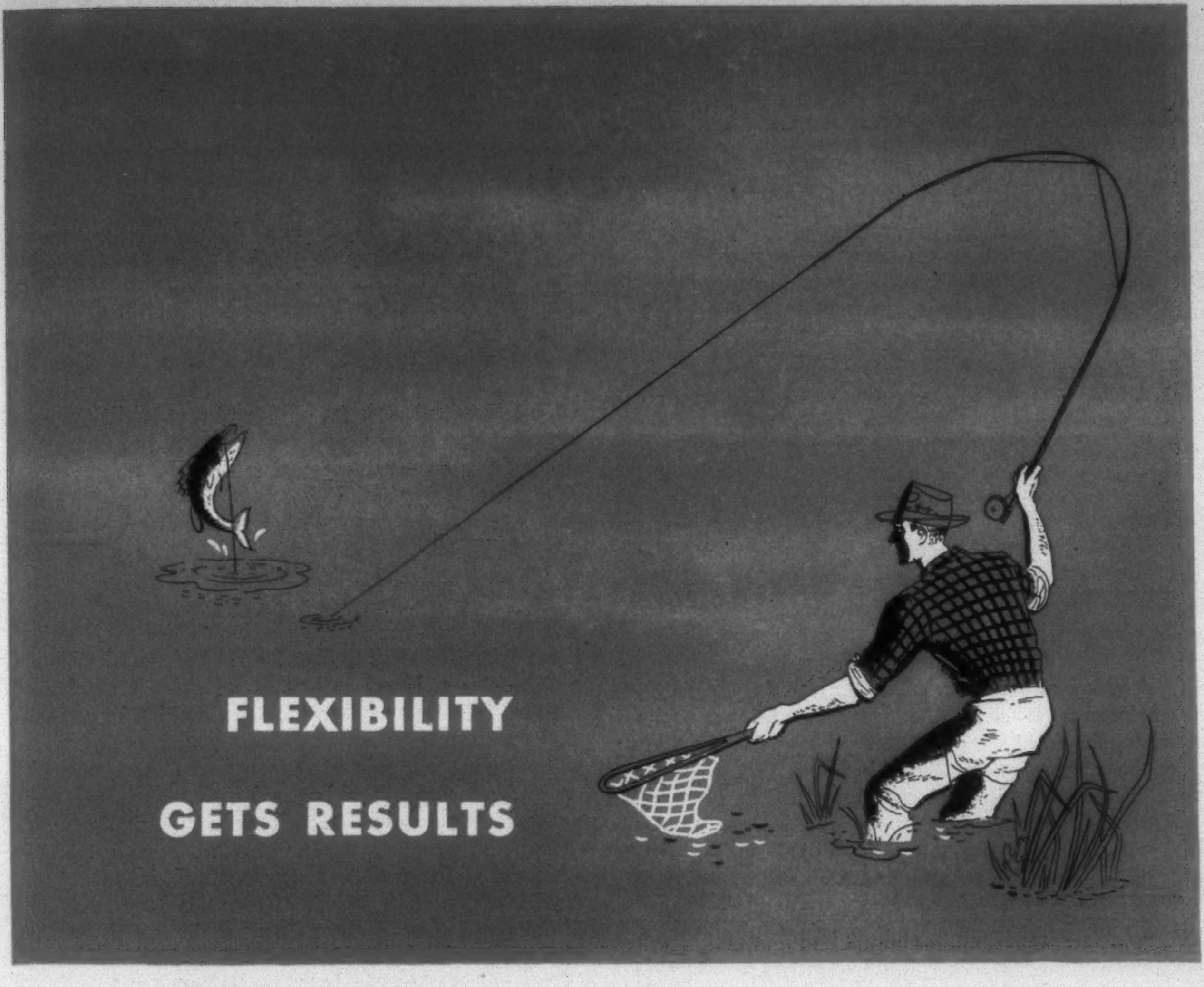
While it is not normally necessary or advisable to retreat a glyoxal-stabilized fabric, this can be done if some error is made in processing such that the desired reaction is not obtained. Reprocessing is possible because no stiffening of the fabrics occurs. Moreover, glyoxal stabilization can be combined, under the proper conditions, with other finishes which require much the same mechanical handling, including a curing operation. An example is the combination of certain durable water repellent treatments with the stabilization treatment. A technical characteristic of viscose rayon fabrics treated with glyoxal for stabilization which is of considerable interest, is the fact that the fabric is not soluble in cuprammonium solution, and will not form cellulose xanthate as would the same fabric before treatment. This would seem to be an indication of fundamental chemical change in the nature of the fibers and in combination with the greatly decreased swellability of the fibers, would seem to indicate that actually a new type of fiber is produced by the reaction.

The chemical reaction and the heat treatments of the process result in some decrease in the tensile strength of the treated fabrics compared with the same fabrics before treatment, but with a reasonable degree of control during the operations, the dry tensile strength loss need not exceed 20 per cent and should average lower than this amount. The wet tensile strength usually shows even less reduction. The treated fabrics also show an apparently lower abrasion resistance than the untreated fabrics, as determined by the Taber Abraser on the dry fabric. However, when collars are made of the treated and untreated fabrics, and these are subjected to multiple laundering operations, the untreated collars show wear much sooner than the treated ones, and after 40 launderings the untreated colars show bad distintegration, whereas the treated ones are still in good condition. This would indicate that the treated fabrics have fundamentally better resistance to washing fluids and the degrading effects of such fluids, and at the same time have better resistance to the type of wear which occurs in the wash-wheel.

I would like to point out that our process is no mere laboratory curiosity. It has been used with much success in commercial demonstrations on a wide variety of both filament and spun rayon fabrics in white as well as vat dyed shades. A discussion of the plant equipment that we have used in our work on glyoxal *(Continued on Page 64)*



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Rocking Chair Money

A young and very efficient Negro veteran who had been employed as janitor for several months at $28 per week was wiping the dust from the office furniture while the manager of the company was seated at his desk.

The following is an accurate report of the conversation which took place:

Manager—Jim, how do you like your job?

Jim—I likes it fine and you-all treats me well but I ain't going to be here much longer.

Manager—Why are you going to quit if you like your job?

Jim—I does like my job and you are paying me as much as anybody gets on this kind of job but it won't be long now before I can get "rocking chair money" again.

Manager—What do you mean by "rocking chair money?"

Jim—You see, boss, it is like this. You pay me $28 each week and the "take-out" is $6.00, so I only gits $22 to take home.

When the time comes that I can get "rocking chair money" again I gits $20 per week and there ain't no "take-out." Then one day each week I goes down to the place near the postoffice where other black boys go. I don't go early, in fact, I don't go until about 10 o'clock because we can get as much by starting late as if we start early.

Pretty soon a white gentleman drives up and wants two or three boys to do a special job for him. We trades with him. He offers 50 cents per hour but we want 60 cents or maybe 75 cents and sometimes we get 75 cents.

We tells him that he came late and will have to pay us for all day and drive us to the job and back and he finally agrees to pay $6.00 for the rest of the day.

We get back to the postoffice about 5 o'clock and he pays me $6.00 and don't bother about no "take out."

I works five days a week for you and gits home Friday night with $22.

I sits and rocks five days when I can git "rocking chair money" and works one day and I has $26.

Boss, I sure does love my "rocking chair money."

To give unemployment money to a man who cannot get a job or to one who cannot work because of physical disabilities is one thing but to encourage able-bodied men to remain idle when jobs at good prices are available everywhere is quite another.

No government can last which encourages idleness and gives support from tax money to those who remain idle because "rocking chair money" is freely offered to them.

Department of Textile Machinery Design

When Dr. F. C. Toy, head of the Shirley Institute of England, was in the United States last spring, textile manufacturers at Greensboro, N. C., gave a luncheon for him.

In the course of his remarks at that luncheon Dr. Toy said:

> We, in England, appreciate the progressiveness of our manufacturers of textile machinery but do not feel that all of the designing and developing should be left to them. We have therefore, established in the Shirley Institute a Department of Textile Machinery Design and have employed a group of engineers and designers.

Dr. Toy's statement made such an impression upon the mill men present that a meeting of the executive committee of the board of directors of the North Carolina Textile Foundation, Inc., was held and it was voted to provide funds for the establishment of a Department of Textile Machinery Design in the School of Textiles at North Carolina State College. As the result of that movement Clarence M. Asbill, a native of Columbia, S. C., has been employed and is now head of that department.

Mr. Asbill is an engineering graduate of Clemson College and Cornell University and also attended the Westinghouse School of Engineering. He has had considerable experience in machinery designing and holds a number of patents. Until he accepted his present position he was connected with the Callaway Institute at LaGrange, Ga.

During the war, when it appeared that there would be an inadequate supply of linters for gun cotton and other purposes, he was given the assignment of designing a machine which would cut staple cotton into linter length. He successfully performed the assignment and his machine was capable of consuming a bale of cotton in 30 seconds and discharging a sheet of cotton linters at the rate of 30 miles per hour.

One of his other machines now in commercial use is an automatic photoelectric scanning instrument for measuring the grade of cotton.

Textile mills which have mechanical problems relative to the arrangement or design of machinery are invited to call upon Professor Asbill for assistance.

Mill men, especially young men who have ideas about textile machines or processes which they think are good or have patented devices but been unable to market them, are invited to go to Raleigh, N. C., to discuss their problems with Professor Asbill with the assurance that no advantage will be taken of their ideas.

It is hoped that in return for the assistance given them by Professor Asbill they will assign a part interest in their patent to the North Carolina Textile Foundation, Inc., but that is not required.

Last week a retired mill man of Wadesboro, N. C., took two patents to Professor Asbill for consultation because he had not had much success marketing them. Professor Asbill found that one device was good but that due to lack of engineering experience upon the part of the inventor the gears were several sizes too large and the device too cumbersome. With the change in design he will probably be able to market the device, and he offered to assign half interest to the North Carolina Textile Foundation, Inc.

It is no exaggeration to say that there are several thousand textile patents which have never yielded anything to their inventors. Many of them, of course, are not practical, or worthwhile, but along the line are some which, if they had been properly designed and developed, would benefit both their inventors and the textile industry.

Prof. Clarence Asbill and his Department of Textile Machinery Design are primarily interested in inventors of textile devices and in advising those who have ideas which they believe to be worth patenting.

Until such time as departments of textile machinery design are established in the schools of textiles at Clemson College and Georgia Tech, the services of Professor Asbill will not be limited to North Carolina and his field of service will cover the entire South.

The School of Textiles at North Carolina State College has already given Professor Asbill an assignment to design a certain machine and if he succeeds, as we believe that he will, there are very interesting possibilities.

Business Foundation, Inc.

On July 13th more than one hundred and fifty of the most prominent business men of North Carolina attended a luncheon at Chapel Hill, N. C., at which the organization meeting of the recently chartered Business Foundation, Inc., was held and R. M. Hanes, president of the Wachovia Bank & Trust Co., Winston-Salem, N. C., was elected president.

Seldom has anything occurred in North Carolina which has been more misunderstood and some newspaper editors of the type who call themselves "liberals" have pictured. Business Foundation, Inc., as business men organizing to fight the liberals and the C. I. O.

One man writing in the Raleigh *News & Observer* said:

> The imposing list of truly "prominent" sponsors, members and officials ranges from liberal Frank Graham to such bourbons as David Clark, John Sprunt Hill and Josiah W. Bailey. Surely out of such an imposing stew must come a brew laden with weighty objectives!
>
> Time will prove whether the ideals and accomplishments of the organization shall be moulded and fashioned by the liberal ideals of Graham or by the bourbonism of such bourbons as Robert M. Hanes, David Clark, John Sprunt Hill and Josiah W. Bailey.

Blame for the misunderstanding rests squarely upon the publicity bureau of the University at Chapel Hill which was, as always, unwilling to admit that anything remotely good ever happened at or could come out of the State College branch of the University.

Rather than admit that Business Foundation, Inc., was copied almost verbatim from the Textile Foundation, the Engineering Foundation, the Agricultural Foundation and the Dairy Foundation at North Carolina State College, the university publicity bureau referred to Business Foundation, Inc., as "something unique" and intimated that the large gathering of North Carolina business men had some special significance and purpose.

The charter of the Textile Foundation, Inc., and the other foundations at State College were drawn by an attorney who was a graduate of the University at Chapel Hill and there was really no reason why they should have been ashamed to admit that the same phraseology was used.

Business Foundation, Inc., is intended solely to make it possible for the now rather weak School of Commerce and Business at Chapel Hill to acquire the services of outstanding men in that field and to add such departments as will make it the equal of the Harvard School of Business, the Wharton School of Finance and other similar top schools. Like the foundations at State College it will raise funds and be prepared to furnish salary supplements when outstanding men in the field of business can be secured.

The faculty at State College will testify that none of its foundations has ever suggested the employment of any man as a professor or attempted to influence a selection and the same will be true with the Business Foundation, Inc., at Chapel Hill.

We see the need for an outstanding School of Commerce and Business at Chapel Hill and the editor of this journal gladly signed the charter and his check for a very modest amount was the first donation received.

Had the publicity bureau at Chapel Hill not attempted to avoid admitting that Business Foundation, Inc., was very similar to the four foundations already established at State College, misunderstanding would not have occurred, some editorials would not have been written and David Clark would not have been designated as a bourbon along with R. M. Hanes, John Sprunt Hill and U. S. Senator Josiah W. Bailey.

Football Tickets for State-Duke Game

In our last issue we announced that Sept. 28 would be Textile Manufacturers Day at the North Carolina State College School of Textiles.

We announced that after being guest at a buffet lunch at the School of Textiles, there would be an opportunity to attend the football game between Duke University and State College.

We stated that we had 200 good seats set aside and offered to sell them to persons who expected to attend Textile Manufacturers Day but many apparently think that they can get tickets at any time.

We are not trying to promote the sale of tickets, for there is certain to be a sellout. With 4,000 students at State College, and probably 2,000 Duke students coming over from Durham, there will not be such a large number of seats available to the public in a stadium which seats only 15,000.

Next September we expect to receive a flood of letters saying "I am going to attend Textile Manufacturers Day at the School of Textiles. What chance is there to get football tickets?"

The answer is going to be, "All except some bleacher seats in the end zone have been sold."

Tickets are $3.00 each and we advise persons who expect to attend Textile Manufacturers Day to purchase them now. Checks should be made payable to the Athletic Department of North Carolina State College but mailed to us.

It is interesting to note that the first six orders for tickets were:

J. Y. Pharr, Cannon Mills, Kannapolis	2 tickets
J. C. Cowan, Jr., Burlington Mills, Greensboro	4 tickets
Greensboro Loom Reed Co., Greensboro	4 tickets
John Caughman, Spartan Mills, Spartanburg, S. C.	2 tickets
W. E. Crenshaw, Am. Thread Co., Clover, S. C.	2 tickets
John W. Boozer, Halifax Cotton Mills, South Boston, Va.	4 tickets

We are giving this publicity because we wish to see a large attendance on Textile Manufacturers Day and are afraid that failure to get football tickets may keep some away.

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

SHELBY, N. C.—Cleveland Cloth Mills has on order 120 additional Crompton & Knowles S-6 box looms, on which delivery already has started. Also being put into operation are 4,000 additional throwing spindles. There has been no change in the Cleveland organization since it was purchased recently by J. P. Stevens & Co. of New York City.

OPELIKA, ALA.—Contracts totaling $1,077,000 have been awarded to Batson-Cook Construction Co. for an expansion project planned by Opelika Textile Mills, Inc.

HICKORY, N. C.—Hickory Shoe Lace Mfg. Co. has been sold for approximately $20,000 by L. M. Hull to Ellis Mills and several associates. Mr. Mills and M. T. Reavis operate Ellis Hosiery Mills, also located in Hickory.

GREENVILLE, S. C.—Financed by funds of the Brandon Foundation, a recreation center has been opened in the Brandon Corp. mill community. The facilities include bowling alleys and a skating rink.

NASHVILLE, TENN.—Southern Spinning Co. is the new corporate name of the plant formerly operated as Ingram Spinning Co. by Ernest Jones and Ernest Jones, Jr., partners.

DOTHAN, ALA.—Indian River Textile Co. of New York City has leased a local school building which it plans to repair and use as the site of a new textile manufacturing plant. Approximately 200 persons will be employed after a $20,000 renovation program is completed and machinery is installed.

LINCOLNTON, N. C.—Operation of Smith Mills Co., new spinning and weaving plant, is expected to begin the latter part of this month. The new building contains some 11,000 square feet of floor space and will be equipped with 2,000 spindles and 32 looms. The owner is A. H. Smith, formerly associated with Abernathy Mfg. Co. at Laurinburg, N. C.

R. G. Wood (left center), superintendent and vice-president of Bloom Mills, Inc., at Gastonia, N. C., is greeted upon arrival in New York City with 19 executives of the Southern plant by Joseph Bloom, president of R. M. S., Inc., and Bloom Mills. The three-day inspection trip was designed to give the spinning mill officials a picture of techniques employed by the plants which use the yarn manufactured at Gastonia.

LA FRANCE, S. C.—Pendleton Mfg. Co. has announced the establishment of a four-year scholarship at Clemson College which will be open to sons of company employees.

FAIRMONT, S. C.—Fairmont Mills, Inc., is being organized to operate the Fairmont Plant sold by Union-Buffalo Mills for more than $600,000. W. J. Jones of Shelby, N. C., will be president of the new firm, Judah Sultan vice-president, Raymond Sultan secretary and Abraham Sultan treasurer. The last three officials are members of Joseph Sultan & Sons, textile brokerage firm of New York City. The plant is equipped with 14,440 spindles, 383 looms and 23 cards for the manufacture of print cloth.

CHINA GROVE, N. C.—Construction has begun on the new Mill No. 3 of China Grove Cotton Mills Co. The $300,000 project will add 15,000 spindles to the firm's capacity when completed some time within the next eight months.

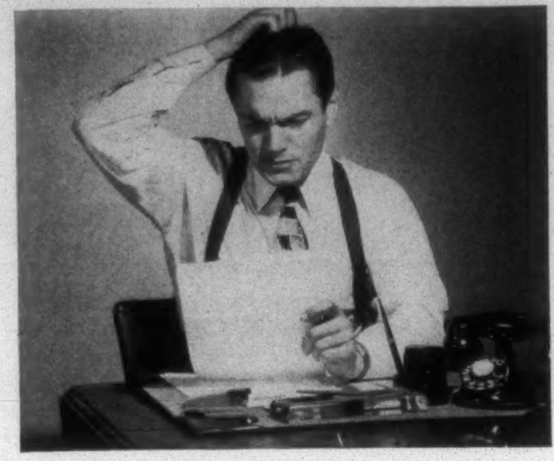
SPARTANBURG, S. C.—Announcement has been made of plans to convert the Saxon Mills plant, now producing print cloth with 41,216 spindles and 1,208 looms, into a combed yarn spinning mill. The firm's plant at Chesnee, S. C., will be converted from production of carded yarns into a combed yarn spinning and weaving unit. Output of combed yarn at the Spartanburg unit, which is to be equipped with 30,000 spindles, will be used in other Reeves Bros. mills.

NEWNAN, GA.—Newnan Cotton Mill is making plans to spin yarn from cut nylon staple in a wide range of counts. The project is still in the laboratory stage.

DECATUR, ALA.—Purchase of the local rayon cord fabric plant it previously operated for the government is announced by Goodyear Tire & Rubber Co. The land, building, complete equipment and machinery were included in the transaction. Purchase price was $956,720. Weaving of rayon yarn into tire cord fabric is the plant's sole function. The fabric is sent to Goodyear's other manufacturing plants for building tires. Among recent improvements was the installation of air conditioning equipment at a reported cost of a quarter of a million dollars. Upward of 150 persons comprise the plant's personnel, which is expected to reach 200 when additional rayon is available.

DANVILLE, VA.—Riverside & Dan River Cotton Mills, Inc., has filed a registration statement with the Securties and Exchange Commission for 50,000 shares of $100 4½ per cent cumulative preferred stock to be offered in exchange for shares of its outstanding six per cent preferred. The exchange will be on a share for share basis. Holders also will receive a $5 payment and accrued dividends on the old preferred. A stockholders meeting will be held in August to vote on a recapitalization plan and a proposal to change the corporate name to Dan River Mills, Inc.

KINGSPORT, TENN.—Tennessee Eastman Corp. employment stands today at a new high of more than 8,500 full-time employees. Comparisons with previous years show a steady climb before and after the war to a present peak of 54 per cent above the 5,700 mark in 1940. The present



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MANY a textile company, however, has rejoiced that it made HENLEY responsible for meeting its requirements. For we have either solved—or at least greatly relieved—their pressing paper problem!

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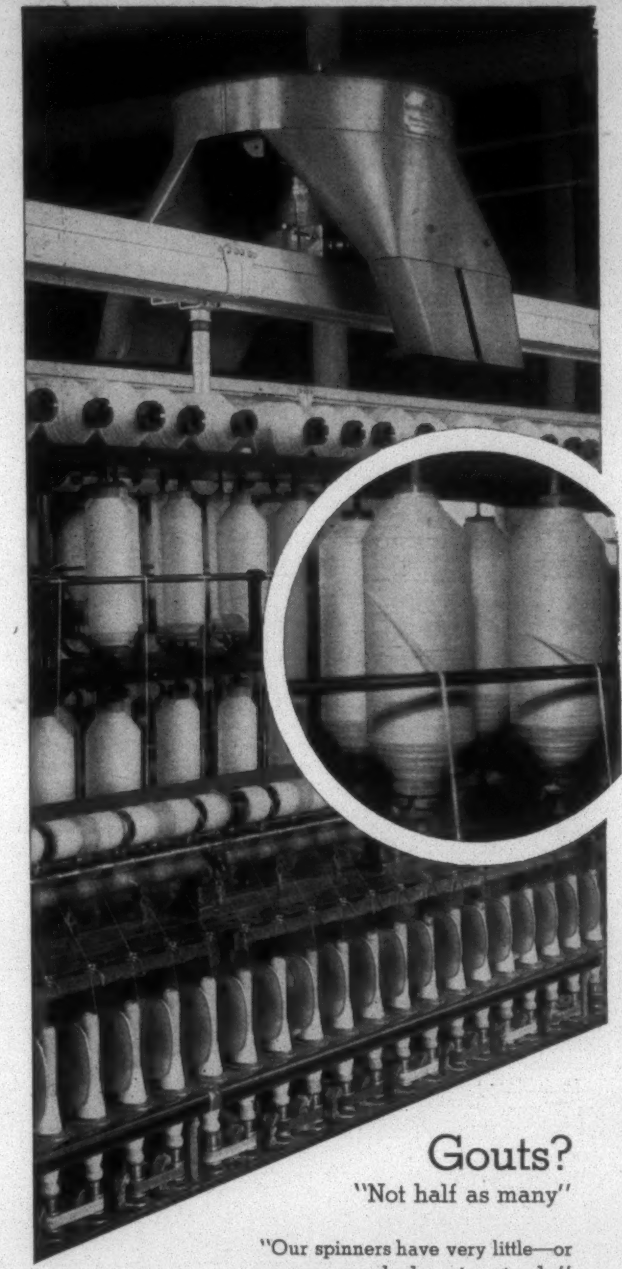

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"Not half as many"

"Our spinners have very little—or no manual cleaning to do"

"Parks Traveling Cleaners helped greatly. Wouldn't want to be without them"

"After installing your Cleaners in spinning, improvement was noticeable in the weaving. Loom stoppage was reduced 32 per cent.

Outlets in Parks Traveling Cleaners may be adjusted. Air streams may be spotted directly down, or out. Each side may be adjusted independently of the other.

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total, which exceeds the wartime high of 7,100, includes hundreds of returned war veterans. A substantial number of additional employees will be required to staff the buildings nearing completion. The corporation's veteran reemployment program has been set up to serve all T. E. C. veterans who reapply for work and then to serve other veterans insofar as circumstances permit.

CRAMERTON, N. C.—Controlling stock in Cramerton Mills, Inc., the 58,000-spindle and 960-loom plant capitalized at $2,582,800, is being purchased by Burlington Mills Corp. According to a joint announcement by Stuart W. Cramer, Jr., and J. Spencer Love, respective presidents of the two concerns, negotiations are going forward for the stock sale and no changes in management, sales policy or operating methods are contemplated.

SWEPSONVILLE, N. C.—The Baker Foundation, created to afford assistance to employees of Virginia Mills, Inc., and their families, will remodel the community building here. The foundation will provide the district with recreational and educational facilities for employees and their families, affecting approximately 1,000 persons. Walter M. Williams is chairman of the foundation; L. I. Ray, vice-chairman; Julian Baker, treasurer; and Althea Williams, secretary.

LANGLEY, S. C.—The large local textile plant, containing equipment and supplies of several United Merchants & Manufacturers, Inc., units, was destroyed by fire July 4. The fire was started when lightning struck the old mill section, and later spread to the new mill section when water supplies were depleted.

RAEFORD, N. C.—Edinburgh Cotton Mills has been sold for approximately $700,000 to Troy Whitehead Machinery Co., Inc., of Charlotte. The plant, equipped with 15,000 spindles for the manufacture of carded yarns, was operated by Edwin Morgan, president of Morgan Cotton Mills, Inc., at Laurel Hill and Laurinburg, N. C.

Among Southern firms which recently have been incorporated to manufacture or deal in textiles are the following: Greensboro (N. C.) Mfg. Co.; Spencer-Campbell Co., Inc., Atlanta, Ga.; Andrews (N. C.) Textiles, Inc.; Preston Converters, Inc., Louisville, Ky.; and Lancaster Looms, Inc., Charlotte, N. C.

Promotions, Resignations, Elections, Transfers, Appointments, Honors, Notes on Men in Uniform, Civic and Associational Activity

PERSONAL NEWS

Paul Knapp, technical superintendent of the Waynesboro, Va., rayon plant of E. I. du Pont de Nemours & Co., Inc., has been transferred to the technical division of the company's rayon department at Wilmington, Del. Dr. G. S. Hooper has been named technical superintendent, and Dr. R. F. Conaway has succeeded Dr. Hooper as assistant director of research.

J. Will Long, formerly general superintendent of Gastonia (N. C.) Combed Yarn Corp. and affiliated plants, has become general superintendent of Barbet Mills, Inc., at Lexington, N. C.

Douglas G. Woolf, former editor of *Textile World* and first vice-president of the Textile Research Institute, has become editor and publisher following purchase of the *Lamanda Park Herald,* a weekly newspaper at Pasadena, Cal.

O. Max Gardner, prominent in the textile industry and now Undersecretary of the Treasury, has resigned as chairman of the advisory committee of the Office of War Mobilization and Reconversion.

Hal Ballard has been promoted from assistant superintendent to superintendent of Hillcrest Throwing Co. at High Point, N. C. He succeeds Allie Bell, who has replaced C. T. Sutherland as superintendent of Cetwick Silk Mills Corp. at Asheboro, N. C. Mr. Sutherland now is vice-president and general manager of Madison (N. C.) Throwing Co.

Raymond J. Payne, left, has become sales representative for Pioneer Atlanta Co., Inc., and Frank G. North, Inc., two Atlanta, Ga., firms which supply the textile industry. He served in the Army five years and represented Stein, Hall & Co., Inc., for a short while before making his present connection. His headquarters and residence will be in Charlotte.

Lee Tillery, formerly assistant superintendent of the Fairfax, Ala., plant of West Point Mfg. Co., has been named director of standards for the company. George Harris, formerly manager of production, has been made assistant superintendent of the gray goods mill at Fairfax.

Dr. Jerry H. Moore, cotton technologist for the North Carolina State Agricultural Experimental Station, Raleigh, has been appointed director of the fiber research department of Railway Supply and Mfg. Co., Cincinnati, Ohio. Since 1927 Dr. Moore has specialized in the development of fiber qualities and staples to give the best results in spinning.

Daniel Hurst has been named assistant superintendent of the American Thread Co. plant at Dalton, Ga. He joined the company last November following 12 years with Callaway Mills at LaGrange, Ga.

E. H. Bost, manager of the Erwin Cotton Mills Co. plants at Erwin, N. C., has been appointed to the executive committee of the Oconeechee Boy Scout Council.

A. B. Matthews, formerly personnel manager at Goodyear Clearwater Mills, Inc., Cedartown, Ga., has been appointed personnel and safety manager of Goodyear's synthetic rubber division.

L. W. Schoelpple, formerly associated with Burlington Mills Corp. at Greensboro, N. C., has been appointed sales representative for the Atwater Division of Hess, Goldsmith & Co., New York City.

C. R. Harris has been appointed vice-president and general manager of Pneumafil Corp., a New York City firm which has been organized to produce and sell in this country textile spinning auxiliary developed

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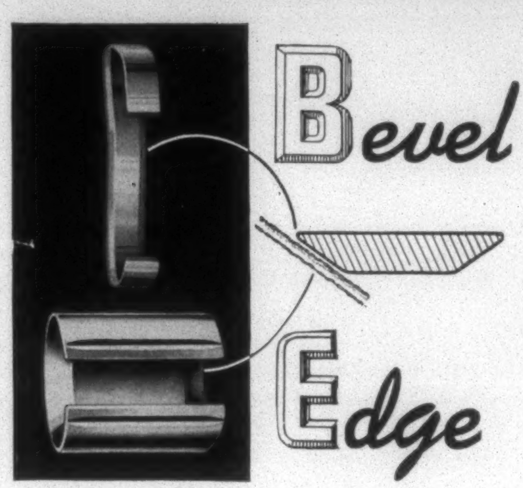

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in Switzerland. The air-actuated system was designed to collect broken threads as they occur in the spinning process, the company states, with resultant increase in spinning efficiency and yarn quality.

BACK TO CIVILIAN LIFE: Jack M. Alexander, Jr., left, son of the Charlotte representative of Slip-Not Belting Co., has returned from Europe following 19 months of Army duty there. He is planning to return to college soon. . . . John H. Garrico, recently released from Army service, has returned to duties as minor construction supervisor at the Waynesboro, Va., plant of E. I. du Pont de Nemours & Co., Inc. . . . Keith A. Bragg, formerly of the Navy, has been engaged as Southern representative for Commonwealth Color & Chemical Co. with headquarters at Charlotte. . . . John G. B. Ellison has returned to W. D. Dodenhoff Co., Inc., Greenville, S. C., as vice-president and director following several years in the Army. . . . Daniel Reid Weedon, Jr., Dr. George P. Fulton and Garvin Bawden, Jr., all former servicemen, have joined the staff of Arthur D. Little, Inc., at Cambridge, Mass. . . . Clifford R. Smith, Southern sales representative for Onyx Oil & Chemical Co. before entering the Army, has re-opened his office at Atlanta, Ga., and will represent the company in Alabama, Georgia, Tennessee, Florida and Mississippi.

Harry L. Derby will retire July 31 from the presidency of American Cyanamid & Chemical Co., Bound Brook, N. J., as well as other executive positions he holds with American Cyanamid Co. affiliates.

Fuller E. Callaway, Jr., first vice-president of the American Cotton Manufacturers Association, was hurt recently at his home near LaGrange, Ga., when thrown from a horse.

Robert C. Atherholt, secretary and treasurer of Hampton Looms of Virginia, Bedford, Va., has been appointed a member of the Lynchburg (Va.) Hospital Authority.

Henry W. Jordon, president of Sellers Mfg. Co. at Saxapahaw, N. C., has been elected president of the North Carolina Railroad Co. D. P. Stowe of Belmont, N. C., another textile executive, was elected a director of the firm.

T. M. Duncan has resigned as overseer of carding at Acme Spinning Co., Belmont, N. C., to become superintendent of Union Mills Co., Monroe, N. C. At Belmont he has been succeeded by L. P. Baker, formerly of Ranlo (N. C.) Mills.

W. O. Reed has been promoted from night overseer of spinning to day overseer of spinning at Fitzgerald (Ga.) Mills Corp.

Paul R. Hodges, who at one time was sales manager of the textile division of Dewey and Almy Chemical Co., Cambridge, Mass., has been appointed textile consultant to the firm.

Weston Taylor is now superintendent of Pee Dee Mfg. Co. at Rockingham, N. C. M. M. Clairmont of New York City is president.

Miller West, superintendent of Victory Textiles, has been elected president of the Greer (S. C.) Lions Club.

Marcus W. Carter, formerly superintendent of Chadwick-Hoskins Co. at Charlotte and Pineville, N. C., is now superintendent of Hart Cotton Mills, Inc., at Tarboro, N. C. Robert L. Rogers, formerly superintendent of Glen Raven (N. C.) Cotton Mills, has replaced Mr. Carter at Chadwick-Hoskins.

F. C. Whitten has been appointed assistant superintendent at the Pell City, Ala., plant of Avondale Mills. Thomas Johnson has been named assistant foreman of weaving.

W. F. Summers, superintendent of Steel's Mills at Rockingham, N. C., before it was taken over by Burlington Mills Corp., is superintendent of the old Cowpens (S. C.) Mfg. Co. plant which is being revamped for operation by Leading Embroidery Co.

Joseph H. Bennis, left, currently is celebrating his 50th year of continuous association with New York and New Jersey Lubricant Co., a well known supplier to the textile industry. Under his leadership the company has expanded from a modest plant at Newark, N. J., to a manufacturing concern with seven strategically placed warehouses throughout the country.

OBITUARY

Sir Samuel Agar Salvage, K. B. E., the founder of the United States rayon industry, died at his summer residence at Fisher's Island, N. Y., July 10 at the age of 69. Sir Samuel was widely known in this country as the "father of the United States rayon industry." It was through his efforts that the first commercially successful rayon producing company was established here. This firm, American Viscose Co., now American Viscose Corp., was founded in 1910 by the English firm of Samuel Courtauld and Co., Ltd. Sir Samuel, at that time a yarn merchant and representing Courtauld in the United States, had the foresight and vision to realize the future of rayon in the textile industries and persuaded the English company to establish manufacturing facilities in this market. When the new company was started, Sir Samuel became its sales agent and later became vice-president, then president, and later chairman of the board. During the last few years he had served the corporation as a director. Sir Samuel was knighted by King George VI as Knight Commander of the Order of the British Empire in the 1942 King's New Year's honor list. This recognition came as a climax to a career of service to interests common both to Great Britain and the United States and paid tribute to his important work in helping organize and being the first president of the British War Relief Society in the United States. He is survived by Lady Salvage and three daughters.

Miss Pearl Rodman, 66, treasurer of Rodman-Heath Cotton Mills, Waxhaw, N. C., before it became Waxhaw Cotton Mill Co., died recently at Asheville, N. C. She is survived by four sisters and a brother.

L. Banks Williamson, 68, formerly associated in the operation of Glencoe Mills at Burlington, N. C., and Puritan Weaving Co. and Holt-Williamson Mfg. Co. at Fayetteville, N. C., died July 14 at Fayetteville. He is survived by his widow, one son, one daughter and two brothers.

Eugene Thomas Cannon, 60, a son of the founder of Cannon Mills Co. and a director of the firm, died July 5 at Charlotte. He is survived by his wife, two brothers and four sisters.

Otto Pratt, sales representative for National Ring Traveler Co. for a number of years, died July 5 at his Union Mills, N. C., home. He is survived by his wife and one daughter.

W. Ralph Armstrong, 52, until recently manager and vice-president of Waxhaw (N. C.) Cotton Mills Co., died July 3 at Asheville, N. C. He is survived by his wife, one son, one daughter, three sisters and two brothers.

J. H. Dooley, 63, superintendent of Whittier Mills Co. for the past ten years, died last month at Chattahoochee, Ga. He had been associated with the company for more than 40 years.

E. Martin Philippi, 74, retired American Thread Co. board chairman, drowned July 2 near Sarasota, Fla. He had been associated with the company in various capacities since its founding in 1898. Surviving are his widow, a son and a daughter.

Monsanto Buys Chemical Warfare Service Plant

Monsanto Chemical Co. has announced the lease of the government-owned chemical warfare service plant at Monsanto, Ill., for the manufacture of a series of peacetime products. Company officials said they would spend approximately $1,000,000 on alterations and additions to the plant where an estimated several hundred workers will be employed in the manufacture of products which have been under research study or process development. The lease, company officials said, specifies that Monsanto will keep the plant equipment intact and will ready the plant for wartime operation in case of a national emergency. The plant was constructed early in World War II and was operated by Monsanto for the Army throughout the war.

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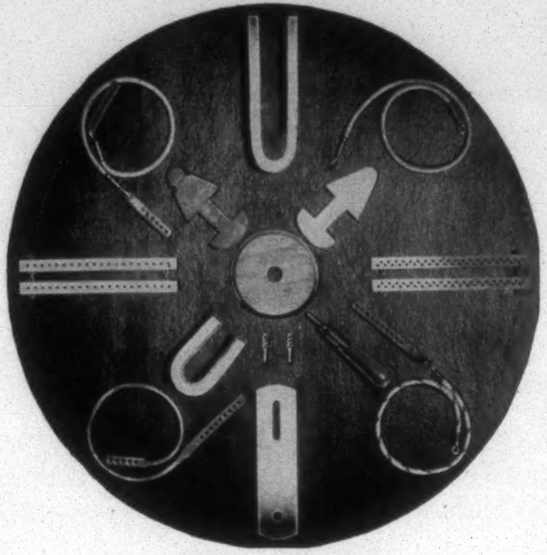

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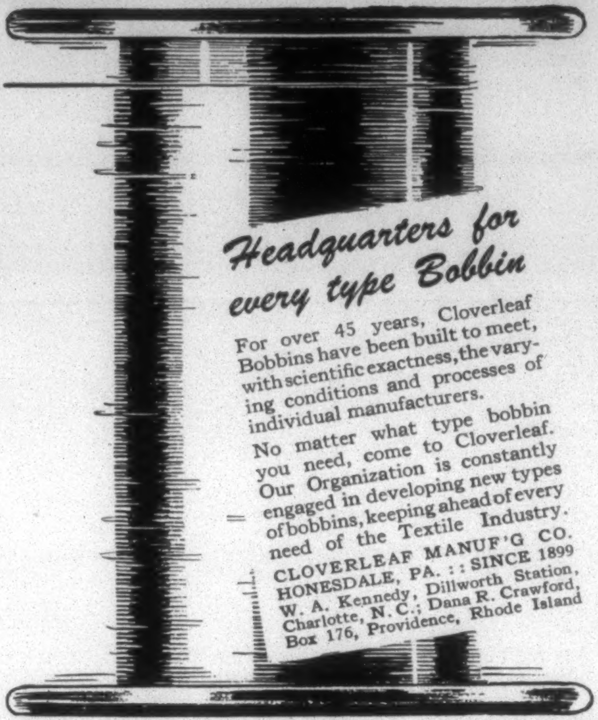

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- SWIM SUITS (elastic)
- DRESS FABRICS (cotton, rayon, wool, worsted, linen, etc.)
- CURTAINS
- VEILINGS
- BRUSHED FABRICS (full width or narrow)
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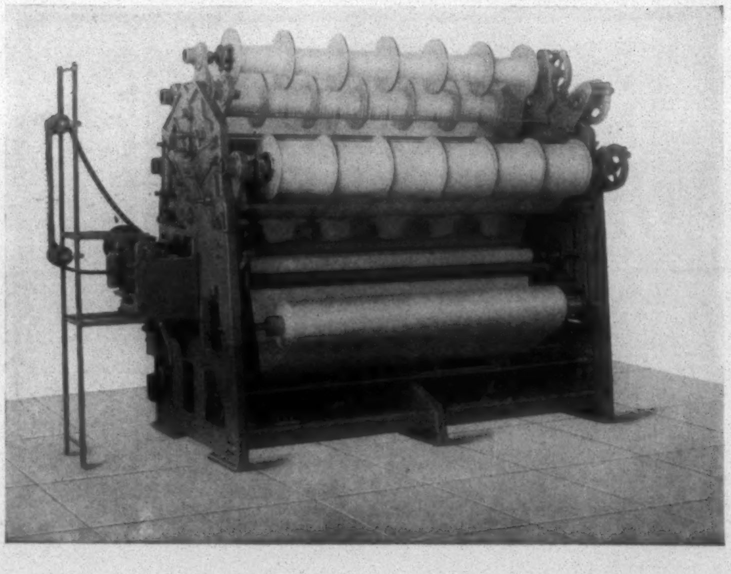

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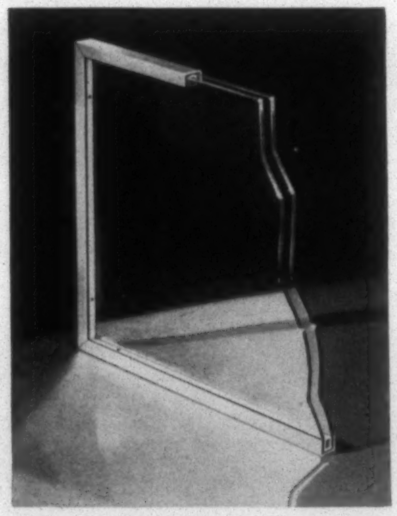
For the Textile Industry's Use

EQUIPMENT — SUPPLIES — LITERATURE

Twindow Insulating Unit Is Developed By Pittsburgh

Development of a new type, double-glazed window insulating unit known as Twindow for industrial and other uses has been announced by the Pittsburgh Plate Glass Co. Twindows are integral insulating units of two or more plates of glass enclosing a quarter-inch or half-inch hermetically sealed air space (see cut). One of the revolutionary features of Twindow is use of hollow aluminum tubing to separate and hold the glass plates in position. The entire unit is framed with a light-gauge stainless steel channel (.015 to .020) with the channel legs extending three-eighths of an inch inward on the surface of the glass from the base around its periphery to give maximum protection during installation and use.



Constituting an efficient thermal and dust insulation, the Twindow unit virtually prevents condensation, one of the most difficult transparent fenestration problems to solve in all types of applications. They should be particularly useful in industrial buildings where manufacturing processes require uniform temperatures and humidity as they help in preventing moisture condensation on windows and provide a measure of control over temperature and humidity. Where protection and safety against impact and exact thermal control is needed, Twindow units can be made from Hi-Test Duplate, Duolite, and Aerolite laminated safety glasses. Such units could find extensive use in industrial processes as special observation windows. Where an extremely high degree of impact resistance is desired a unit composed of Herculite heat-tempered glass can be used. Information on the new Twindow units may be had upon request to Dept. P.R.T., Pittsburgh Plate Glass Co., 632 Duquesne Way, Pittsburgh 22, Pa.

Chemical Firm Being Organized At Durham

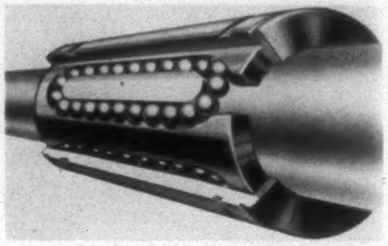
Cardinal Products, Inc., organized at Durham, N. C., to manufacture chemicals for use in the textile industry, is scheduled to begin operations soon, according to an announcement by officials of the firm. Robert Bright is president, Gerald Cooper vice president, and S. T. Amore secretary-treasurer and general manager. The company has been named technical sales representative for Glyco Products Co. in the Carolinas and Virginia.

General Chemical Buys Sulfuric Acid Plant

General Chemical Co. has purchased the Front Royal, Va., plant which it operated during the war in producing 160,000 tons of sulfuric acid each year for the rayon tire cord industry, according to an announcement by the War Assets Administration. The firm will continue production of sulfuric acid, employing approximately 50 persons.

Thomson Starts Production Of Round Shaft Bushings

The standardization and production of the round shaft type ball bushing has been announced by Thomson Industries, Inc. The manufacturer claims that production of this new anti-friction bearing brings to the designer a bearing for his linear motions that possesses all the advantages and economies that ball bearings impart to rotary motions. In addition to the reduction of wear, friction and maintenance afforded by all types of anti-friction bearings, the manufacturer states, the availability of ball bushings offers the engineer a solution to problems inherent to plain sliding linear bearings. Ball bushings, it is further stated, also offer the other advantages of ball bearings, such as savings from the use of smaller drive motors, gears, linkages, etc., operating economies due to reduced load, longer life, increased reliability, less servicing, higher operating speeds and sustained precision.



Standard ball bushing sizes vary from ¼-inch shaft size to 4 inches. Sizes from ¼-inch to 1 inch vary in ⅛-inch steps; from 1 inch to 3 inches in ¼-inch steps and from 3 inches to 4 inches in ½-inch steps. Production of some of the smaller sizes is now under way. Volume production of the remaining sizes will be started as rapidly as the tooling for each can be completed. A booklet containing complete engineering information is now available without obligation.

Westinghouse Bus Duct Described in Booklet

To aid in the selection and application of a bus duct system to provide bexible, accessible power in industrial plants, a new data book is announced by the Westinghouse Electric Corp. The new 40-page booklet diagrams and analyzes step by step three typical bus duct installations. Drawings and photographs of the duct components illustrate the ease of installation, sturdy construction and trouble-free

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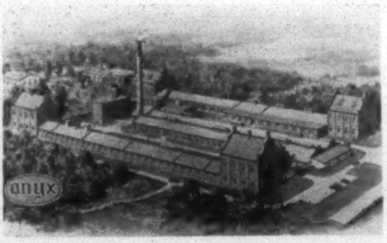
design of the equipment. The engineering data section of the booklet includes standard ratings of main breakers, temperature conversion tables, formulas for determining amperes, horsepower, kilowatts and kilovolt-amperes, and load power factor curves, and other information designed to aid in correctly applying bus duct, and in selecting power take-off devices. Copies of the new booklet (B-3714) may be secured from the Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pa.

Onyx Oil & Chemical Acquires New Facilities

Onyx Oil & Chemical Co., Inc., Jersey City, N. J., manufacturer of textile chemicals, synthetic organic detergents, wetting agents and cationic germicides, is expanding its production facilities through the acquisition of a plant at St. Charles, Staten Island, N. Y., to be ready for production about Aug. 1. The new plant, shown in accompanying sketch, is located on eight acres of land owned by Onyx, and has its own water supply and dock facilities. Production schedules have been set up for manufacturing resin emulsions, quaternaries and alkyl naphthas. This is to be extended to include larger volumes of other products now being made at the Jersey City plant.



Additional Space Leased By Industrial Rayon

Plans for the expansion of Industrial Rayon Corp. machinery manufacturing operations and research activity were disclosed July 5 with the announcement that the company has arranged to lease 43,000 square feet of floor space at 880 East 72nd Street, Cleveland, Ohio. Lorin A. Corey is manager of Industrial Rayon's machinery division, which will occupy this space under a five-year lease. This plant will be devoted to the manufacture of spindles, thread-advancing reels and other parts for continuous process spinning machines which the company is building for export, in addition to machinery for the company's own plants.

The company has contracts to manufacture the initial continuous spinning machines for new plants employing Industrial Rayon's process in England and Sweden, and is to furnish all the continuous process machines for the new plant of Compania Rayonera Cubana, which has purchased Cuban rights to the Industrial Rayon process. In addition to these manufacturing operations, mechanical research and development work will be carried out at the new location. The space previously devoted to these activities at the main plant will be used to accommodate the company's expanding research activities.

American Standards Assn. Offers New Year Book

The American Standards Association has announced publication of its 1945-46 Year Book. This is the first year book published by the association since 1938. It, therefore, contains much new material of value to engineers, executives and technical students. The book gives information about officers and members of the board of directors, of the standards council and other policy forming committees of the American Standards Association. It also carries such basic documents as the constitution and by-laws of the A. S. A. and much information about the set-up of the organization and how standards are developed. The center section of the book is devoted to a listing of approved American standards and projects under development together with the scopes of these projects and names of officers and members of active technical committees. Those interested may obtain copies of the year book free of charge by writing to the American Standards Association at 70 East 45th Street, New York 17, N. Y.

New Resin Emulsion For Coating Fabrics

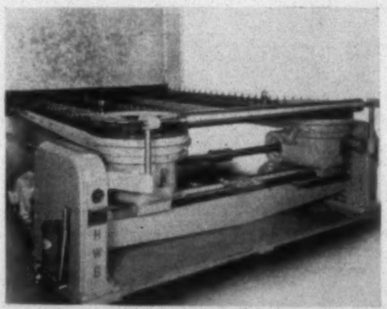
A new resin emulsion, designed for use in the plasticizing of Buna N films and the polyvinyl chloride latices, such as the Geon latex series used in the treatment of fibers, is announced by Resinous Products & Chemical Co. of Philadelphia. Known as Emulsion G-25, this aqueous dispersion of Paraplex G-25 is characterized by non-migration, permanence, resistance to heat and hot oil, and by flexibility at low temperatures. Combinations of the emulsion can be pigmented to give coated fabrics a variety of colors, with ease of application and absence of flammable or expensive solvents greatly widening its application in the plasticizing field. In pigmenting coated fabrics, best results are obtained by preparing a paste of the pigment in water using Triton R-100, a dispersing agent produced by an associate, Rohn & Haas Co. The dispersed pigment then can be compounded readily with the emulsion mixture.

Whitehead To Produce New Textile Machinery

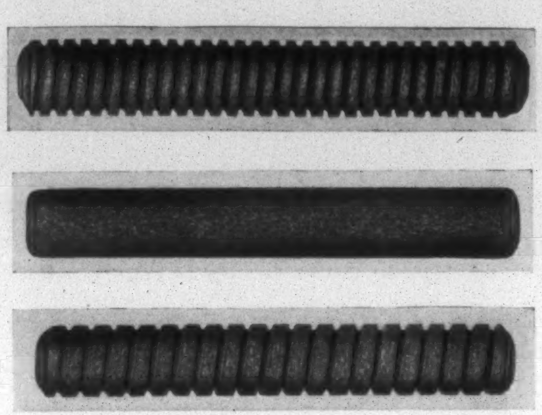
Troy Whitehead Machinery Co. currently is planning to spend more than $150,000 to build and equip a plant for the manufacture of new textile machinery adjacent to its present facilities near Charlotte. Troy Whitehead, president, stated recently that his company for some time had been accumulating materials which will be used in constructing a plant with 30,000 square feet of space. The type of textile machinery to be produced will be announced later. At present the company concentrates on the repair and distribution of used machinery.

Butterworth Announces New High-Speed Tenters

H. W. Butterworth & Sons Co. recently announced a mercerizing tenter that can operate at speeds up to 100 yards per minute, and a straight automatic tenter (shown below) that operates at speeds up to 250 yards per minute. These high speeds are a result of a new overhead drive which Butterworth engineers developed during the war when the plant was engaged in ordnance production. This new, heavy



TEMPLE ROLLS OF ACCOTEX



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duty, overhead drive is semi-silent and operates at a higher degree of efficiency than has ever before been achieved, due to the close control provided by the modern width and speed indicators. These indicators allow a constant check on the faster starting and operating speeds.

The drive heads are constructed of hardened steel alloy worms with magnesium-aluminum-bronze worm wheels mounted on Timken bearings in an air cooled Meehanite casing. The "uniseal" construction and sealed worm drives prevent leakage, and vents eliminate the customary oil circulation system. Recognizing the chain as the heart of the tenter, Butterworth has provided extra large sprockets and chain openers as standard equipment for the chain guides, to reduce the wear on the chain and nippers. The new Butterworth tenters have an improved lubrication system and lowered horsepower requirements.

Goodrich To Handle Proofing Compounds

Joint announcement is made by B. F. Goodrich Co., Akron, Ohio, and Treesdale Laboratories, Inc., Pittsburgh, Pa., that the former will manufacture and sell Permaproof compounds for flameproofing and mildewproofing fabrics, as well as making them waterproof. The compounds were developed by the Pittsburgh company's staff. The announcement claims Permaproof, developed during the war upon the urgent request of military authorities for a material that would enable fabrics to withstand the most rigorous service conditions, will permanently flameproof and mildewproof any fabrics to which it is applied. Fabrics treated with Permaproof will cease to burn as soon as direct flame from an external source is removed, gases formed by decomposition of the chemicals in the compound extinguishing the blaze and making it impossible for the treated material to withstand combustion. Among advantages of Permaproof is that fabrics treated with it will withstand normal outdoor weathering and numerous launderings and still retain flameproofing and mildewproofing effectiveness. The compounds have the highly desirable quality of not "tenderizing" fabrics, but will actually increase their strength by at least ten per cent, with little effect on the hand of the fabric.

Two principal types of Permaproof are being marketed. The first, the Permaproof 100 series, is designed chiefly for treating tent, awning, hatch cover, tarpaulin fabrics and other outdoor protective materials, is available either as a white translucent liquid or in colors. Solid content depends on the end use, the 100 series being approximately 85 per cent. The fabricator can then dilute with ordinary mineral spirits such as naphtha or lead-free gasoline to the desired concentration. The second type will be known as the Permaproof 200 series, designed chiefly for interior fabrics such as curtains, drapes, rugs, upholstery fabrics, etc. It will have a solids content of approximately 60 per cent and has the desirable characteristic of being non-inflammable. It may be diluted with water to the desired concentration. In addition to withstanding laundering, it has the further desirable property of resisting dry cleanings.

In the use of either type, the required dry add-on (percentage of added dry weight based on original dry weight of fabric) determines the concentration to be used, with the dry add-on varying

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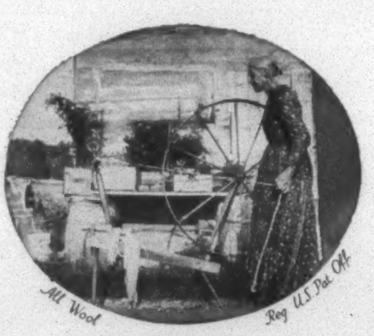

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between 20 and 50 per cent, depending on weight and weave of the fabric. Application of the compound is best by dip and nip (immersion and removal of excess liquids by squeezing) followed by drying at elevated temperatures. Little masking of the colors accompanies use of the translucent liquid on dyed fabrics by this method. Good results also can be obtained by brushing and air drying. The material is available in one and five-gallon cans and 30 and 55-gallon drums. B. F. Goodrich technical representatives work with processors in handling manufacturing problems.

A new 28-page pocket-size booklet on its complete line of industrial rubber products has just been issued by the Goodrich firm, and is available upon request. The booklet lists the company's lines of flat transmission belting, conveyor belting, fractional horsepower V-belts and sheaves, multi-V-belts and sheaves, all types of hose and hose couplings, adhesives, industrial clothing and other products.

New Fiberglas Cloths For Coated Fabric Bases

Four new Fiberglas cloths, designed specifically for use as a base for coated fabrics, are announced by Owens-Corning Fiberglas Corp., Toledo, Ohio. The cloths are suitable for coating, by the knife method, with high solids vinyl resin compounds or synthetic rubbers. Outstanding property of the cloths is their retention of tensile strength under moist conditions when the cloths are given an after-treatment recommended by the manufacturer. Suggested uses of the coated Fiberglas cloths are coverings for outdoor furniture, awnings, canopies, tarpaulins, aprons, shower curtains and industrial cloths. The new Fiberglas cloths are woven of continuous filament Fiberglas yarns. Selvages of all cloths are one quarter inch. Minimum breaking strength values are given as a guide, not as a specification.

New Types of Ceglin Have Increased Uses

Sylvania Industrial Corp. has developed new types of Ceglin cellulose ethers which are said to greatly increase the range of uses of these durable textile finishes. The new types are soluble in dilute alkali solutions and, because of this low alkali concentration, they may be used for finishing acetate rayon and in the treatment of viscose rayon fabrics, in adhesives, paper sizes, as dispersing and thickening agents for pigments and dyes, and for paper and textile printing. In addition, they permit a compounding with rubber latex, with natural and artificial latices, starch, casein and the like. Covered by U. S. Patent 2,388,764, which was issued to Dr. Frank H. Reichel and Dr. Ralph T. K. Cornwell, and assigned to Sylvania Industrial Corp., they are sold under the trademark Ceglin E.S.

The patent points out that heretofore it has been possible to produce cellulose ethers which are soluble at 0°C. in five per cent to ten per cent aqueous solutions of sodium hydroxide. Such high alkali concentrations are objectionable for finishing certain fabrics, in particular those containing wool and silk, because the alkali may be detrimental to them. According to the present patent, a celloluse ether solution can be prepared at room temperature with low concentrations of alkali but with higher concentrations of the cellulose ether, by dispersing alkali cellulose or a low-etherified cellulose ether in five per cent to ten per cent equeous solution of sodium hydroxide, and then etherifying the cellulosic material in such liquid medium. In this manner a more uniform etherification is achieved than by treating the cellulosic material while it is in a solid shredded form. The patent contains five process claims and one claim to a mixed alkyl hydroxy-alkyl cellulose ether. In addition to their new uses these cellulose ethers can be used where the regular Ceglin cellulose ethers have been employed.

Cellophane Spangles For Decorative Finishes

Rayon Processing Co. of R. I., Inc., Central Falls, R. I., is now in production on Cellophane Spangles, a surface coating consisting of very finely cut particles of cellophane. Produced at present only in white, the spangles when applied to a surface give it a distinctive sparkle, due to the reflection of light by the million of tiny facets. With reference to textiles, spangles can be applied by dot printing in a manner similar to flock.

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Four Booklets Give Facts Relative To Durene Yarns

Four booklets relating to the Durene quality story from the standpoints of consumer, retailer, manufacturer and yarn producer have been issued by the Durene Association of America to coordinate and highlight the promotion of merchandise made of Durene yarns. These booklets were prepared in responsed to requests for a brief presentation of the quality advantages of Durene yarn and their application to increasing consumer interest in quality goods. Members of the association, all producers of Durene yarn, are Aberfoyle Mfg. Co., the Hampton Yarn Division of American Thread Co., American Yarn and Processing Co., Dixie Mercerizing Co., Clarence L. Meyers & Co., Sellers Mfg. Co., Southern Mercerizing Co., Spinners Processing Co. and Standard-Coosa-Thatcher Co.

Two Booklets Offered By Carbide and Carbons

A new 12-page booklet, *Physical Properties of Synthetic Organic Chemicals,* has just been issued by Carbide and Carbon Chemicals Corp., a unit of Union Carbide and Carbon Corp., 30 East 42nd Street, New York 17, N. Y. Data on the physical properties, and applications for more than 175 synthetic organic chemicals are presented in tabular form for ready and easy reference. This booklet has been designed as a condensed guide for research chemists, laboratory technicians and purchasing agents. Copies can be obtained without charge by writing to the company and mentioning Form 6136.

Another new booklet just published discusses the physical and chemical properties of ten commercially important ketones produced by Carbide and Carbon Chemicals Corp. Specifications and shipping data are given in this booklet, as well as information regarding principal uses for these products. Ketones are important intermediates in the synthesis of industrial chemicals, and possess a high solvency for nitrocellulose and Vinylite resins. They are widely used in the stripping of dyestuffs from textiles and dewaxing of lubricating oils. A copy may be obtained by requesting Form 4767.

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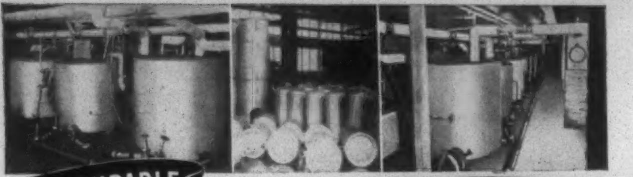

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Editor Takes Crack At 'Cotton Bloc'

Entitled "How to Crack the Cotton Bloc," an editorial carried in the June *International Teamster* declares that the "cotton bloc" in Congress is "responsible for most of our domestic troubles." The bloc, according to the editor, is "composed of the reactionary Southern Democrats who team up with the equally reactionary Northern Republicans to destroy the living standards of the American people." Listing the bloc's chief evil as being instrumental in achieving higher prices for cotton and indirectly for shirts, dresses, underwear, socks, etc., the editor urges that the buying public boycott cotton goods. The *International Teamster* is the official organ of the International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America.

In reply to the foregoing, the National Cotton Council, in a letter addressed to the "people of the cotton belt," has declared that "the pompous, boundless insolence of today's power-bloated union bosses finds no better illustration than the latest demand of Teamster Dictator Dan Tobin, 'Don't buy cotton.'" The council statement says, further, that the "significance of the Tobin attack does not lie in its possible effect upon the consumption of cotton products. If there is any effect, it will take the form of increased demand as an expression of public resentment against the impudence of such an appeal."

Sane Price Policy Urged for Industry

"Representative leaders of the cotton textile industry, from Maine to Texas, declare flatly that no advantage will be taken of free market conditions," stated Dr. C. T. Murchison, president of the Cotton-Textile Institute, July 2 following a poll of cotton mill opinion. He added, "Prices will be kept in line with those which would prevail under a properly administered price control law. There is no prospect that prices at the mill level will show any increase which will measurably affect the cost of living. If this same attitude is adopted by apparel manufacturers and retail distributors, as it no doubt will be, the death of price control will mean more goods for the consumer at prices which will not be materially higher than those prevailing. The fantastic predictions of the President and the O. P. A. administrators are totally without reason or foundation."

Maintenance of maximum production of cotton textiles, the prompt shipment and equitable distribution of goods as they are produced, avoidance of unnecessary and unwarranted price increases and excessively long-term contracts were urged July 11 by the board of directors of the Cotton-Textile Institute at a meeting in New York City. Following is the text of the statement of policy which was unanimously approved by the board:

"We recognize that cotton textiles are a vital necessity to the American people. In view of the possible permanent discontinuance of the Office of Price Administration, it is

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essential that the industry itself take steps to assure maximum production and fullest possible flow of goods to all of the channels of distribution at reasonable prices. To that end we recommend that all individual members of the industry adopt and adhere to the following policies: (1) Maintenance of maximum production during the period of scarcity; (2) Prompt shipments and equitable distribution of goods as they are produced subject to remaining government controls in order that existing scarcities may be removed as speedily as possible; (3) That no unnecessary and unwarranted price increases be made but where price increases in the interest of production are essential they be made in accordance with the well-established formula which has been approved both by Congress and by industry in general namely, prices which will not exceed the sum of replacement cost of raw cotton, cost of manufacture and a reasonable profit; (4) That long-term contracts be avoided. Past experience indicates that the extensive use of long-term contracts is conducive to speculation and hence is inflationary and under conditions of commodity scarcity serves to encourage the withholding of goods from final consumption. Conversely, when market conditions are reversed, such contracts always result in great injury both to buyers and sellers.

"Inasmuch as only a small percentage of the products of the spinning and weaving divisions are finished by the mills for ultimate consumption and none of the goods flows directly from the mills to the ultimate consumer, the success of this program depends upon the co-operation of subsequent processors and distributors such as converters, garment manufacturers, the knitting trades, wholesalers and retailers. We appeal to these groups to co-operate and are happy to say that many of them have indicated a willingness and desire to do so."

Thread Executive Prescribes for Industry

Public confidence in the democratic system of free enterprise must be restored before true employee-employer understanding can come to the South, according to Guy B. Arthur, Jr., vice-president and director of American Thread Co. The textile industrialist was the subject of a recent interview by the *Atlanta* (Ga.) *Journal.* While the American public enjoys luxuries unheard of in other countries, he said, the present trend toward a controlled economy with the suppression of individual initiative "is not for the best interests of the people of these United States." He said that one possible means of rebuilding public confidence may be an educational program for the masses to convince them of the necessity of production to win the peace. He cited the need of employer leadership, and suggested that management set up and maintain a free and informal system of two-way communication between itself and employees. He laid to management the responsibility of establishing an effective public relations program.

Joshua L. Baily & Co., Inc., New York City, a new corporation, has succeeded the partnership of Joshua L. Baily & Co., under which name the business has long been conducted. There will be no change in management or policy of the concern.

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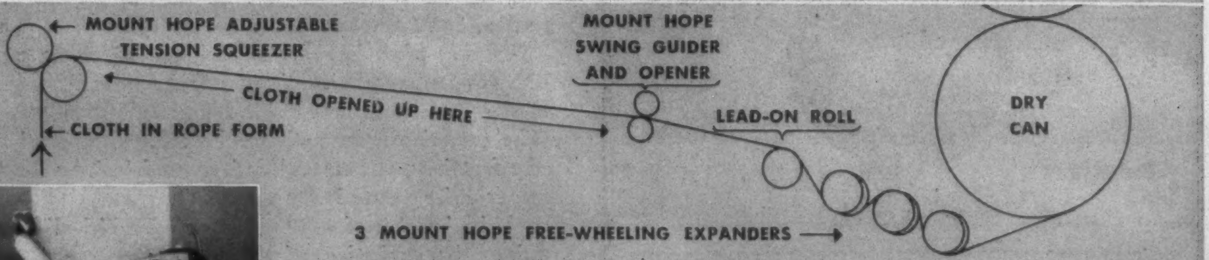
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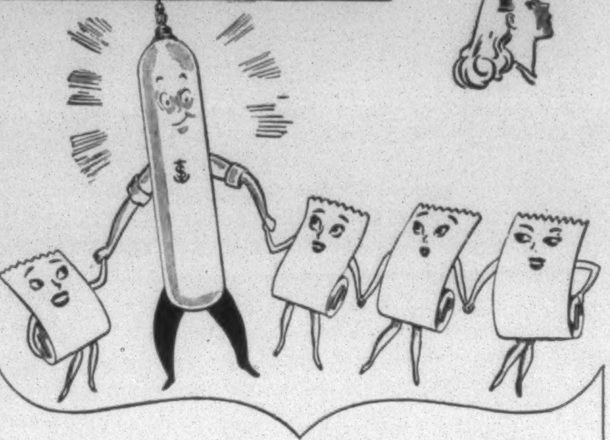

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Cotton Researchers Told Economy In Jeopardy

Belief that America's envied economic structure is tottering because of its loss of liberty was expressed by Ben J. Williams of New Orleans, past-president of the American Cotton Shippers Association, to 300 representatives of the cotton industry at the seventh annual Cotton Research Congress in Dallas, Tex., this month. An economic structure which has rested on the constitution of the United States and been the envy of the outside world is tottering, he said, adding, "The principal need of the people of the United States today is economic liberty. They require liberty to trade their goods and their services with each other and with the outside world under terms which do not involve preferential rights or privileges."

Dr. Amos E. Taylor of the U. S. Department of Commerce said that, since America has approximately one-half of the world's industrial capacity, it has too much at stake to be indifferent to the kind of trading system he said we shall have in the post-war era.

Highlighting the laymen's session on the second day of the congress were talks by E. J. Condon, assistant to the president of Sears, Roebuck & Co., who proposed that serious consideration be given the idea of setting up a program whereby the development researchers working on fiber improvement and fabric construction would join hands with the merchandise testing and development laboratories; Ed Lipscomb, National Cotton Council promotional director, who illustrated many of the end uses that had been developed by adding research to cotton; and Emily Wilkins, designer for Young Originals, who told the congress that greater variety in fabric construction would open greater avenues for interpretation for designers.

Preservation of Price Records Is Ordered

Manufacturers, wholesalers and retailers, and all other persons required under price control regulations to have kept records must preserve them until July 1, 1947. The action, Supplementary Order 167, effective as of June 30, 1946, was taken in order to enable O. P. A. to carry on the powers and duties directed to it under the Executive Order 9745 signed by President Truman on June 30, 1946. The executive order authorized O. P. A. to continue all the functions, powers and duties vested in it by the Emergency Price Control Act of 1942, as amended, and the Stabilization Act of 1942, as amended, which did not terminate by expiration of those acts on June 30, 1946. O. P. A. pointed out that Section 1 (b) of the Emergency Price Control Act of 1942, as amended, provided that all regulations, orders, price schedules and requirements shall be treated as remaining in force for the purpose of sustaining any proper suit, action or prosecution with respect to offenses committed or rights or liabilities incured on or before June 30, 1946. S. O. 167 assures O. P. A. that all

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records, books, accounts, invoices, sales lists, sales slips, orders, vouchers, contracts, receipts, bills of lading, correspondence, memoranda or other papers required to be kept under price control will be preserved in keeping with the continuation of its enforcement duties for violations committed before June 30, 1946.

Dyeing and Finishing During 1945

A total of 7,987 million linear yards of cotton and rayon woven fabrics was bleached, dyed, or printed and finished in the United States during 1945, according to the Bureau of the Census. This was less than the amounts finished in either 1944 or 1943, but almost 27 per cent more than the 6,303 million linear yards reported in the 1939 census of manufactures.

The yardage of cotton fabrics bleached and white finished decreased from 3,681 million yards in 1943 to 3,150 million yards in 1945. The increase in the processing of batiste, dimity, lawn, organdy and voile, colored yarn fabrics, marquisettes and scrim, and print cloths, plain and fancy, in 1945, were more than offset by the decrease in other fabrics. A total of 197 million yards of rayon fabrics were bleached and white finished in 1945 compared to 188 million yards in 1944 and 219 million yards in 1943.

The 3,159 million yards dyed and finished in 1945 was eight per cent less than the 3,435 million yards dyed and finished in 1944 and 11 per cent less than the 3,533 million yards dyed in 1943. A total of 667 million yards of drills, twills, and jeans were dyed and finished in 1945, which was 162 million yards less than in 1944 and 283 million yards less than in 1943. The 256 million yards of print cloth dyed and finished in 1945 was 21 per cent less than in 1944 but only 12 per cent less than in 1943. A total of 1,031 million yards of fabrics were dyed and finished in 1945, 23 million yards less than in 1943.

A total of 1,169 million yards of cotton fabrics were printed and finished in 1945, 11 million yards more than in 1944. The most outstanding increase was in sheetings, which increased from 145 million yards in 1944 to 250 million yards in 1945. Other fabrics showing increases over 1944 are flannels and other napped fabrics, marquisettes and scrim, and sateens. The yardage of rayon fabrics printed and finished decreased from 374 million yards in 1944 to 312 million yards in 1945; the drop in filament rayons accounted for 50 million yards of this decrease.

Wallace Reports On Increased Mill Mergers

An estimated one million spindles of the cotton textile industry's total 23,800,000 spindles changed ownership during the first two months of this year, Secretary of Commerce Henry A. Wallace has reported. Since V-J Day, he added, there has been a marked increase in corporate mergers and the acquisition of small firms by larger ones, a trend closely resembling the concentration that occurred after World War I.

There were 28 mergers or acquisitions in the textile mill products and other fiber manufactures industry group in 1945, 21 of which took place in the final quarter, according to the report.

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- Makes fibres more supple, pliable
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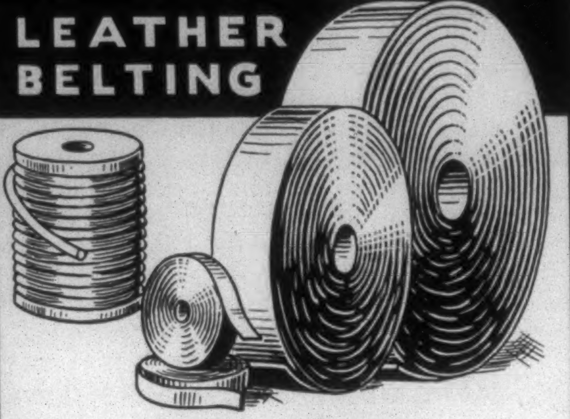

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Testing Society Has Annual Meeting

Arthur W. Carpenter, manager of the B. F. Goodrich testing laboratories at Akron, Ohio, was elected president of the American Society for Testing Materials during the group's annual week-long meeting held last month at Buffalo, N. Y. He succeeds J. R. Townsend of Bell Telephone Laboratories. R. L. Templin, assistant director of research and chief engineer of tests, Aluminum Co. of America, was elected a vice-president of the organization. New members of the board of directors include A. G. Ashcroft, director of research for Alexander Smith & Sons Carpet Co., Yonkers, N. Y., and A. T. Chameroy, manager of the Sears, Roebuck & Co. laboratory at Chicago.

Mr. Ashcroft is chairman of Subcommittee A-3 on Wool and Its Products of A. S. T. M. Committee D-13 on Textile Materials, as well as vice-chairman of D-13. H. J. Ball, chairman, reported that the committee has presented as tentative two new methods of test and is recommending the revision of five tentatives, revision of one standard and reversion to tentative, tentative revision of four standards, revision for immediate adoption of two standards, adoption as standard of three tentatives, withdrawal of two emergency alternate provisions and the reapproval of eight standards which stood for six years without revision or reaffirmation.

Kayloom Produces Variety of Fabrics

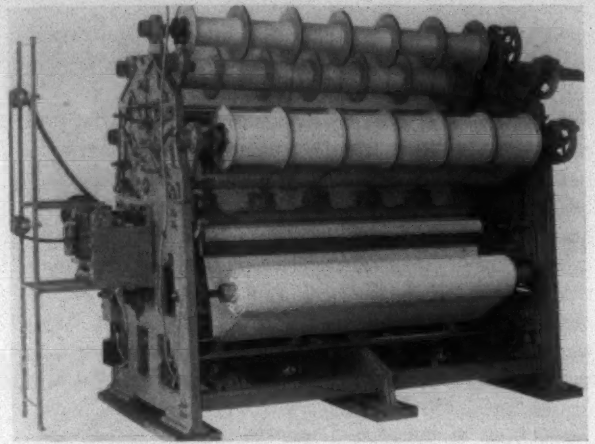
Robert Reiner, Inc., manufacturer of textile machinery since 1903, recently introduced its new Kayloom, a machine which is unique in that it employs a warp and filling as in weaving, but instead of interlacing, ties a knot around their intersection with a knitting stitch. Because of this feature the fabric produced can be made to closely resemble woven goods and knitted fabrics, having the solid fabric texture of the woven product.

The Kayloom was designed by Fritz Lambach, general manager of the Reiner firm and for many years an authority in textile machine construction. The speed of the machine varies with the type of fabric desired. It has a working width of 90 inches, one needle bar, five guide bars, and five beams which can be loaded with either 13¾ or 21-inch diameter spools. It weighs approximately 6,000 pounds.

As pointed out by the builder in demonstrating the operation of the machine, its range of production includes fabrics for corsets, suspenders, hosiery welt tops, shoe cloth, upholstery, swim suits, dresses made of cotton, rayon, wool, worsted, linen, etc., draperies, curtains, veilings, brushed fabrics, metallic fabrics, asbestos fabrics, and others. They can be produced at full or narrow width, with or without fillings. Extremely porous fabrics can be made which do not exhibit the looseness and slippage usually present in similar knitted or woven cloths. Pattern control permits wide variations in design, stripes (warpwise or fillingwise), plaids, checks on the square or diagonal.

August Schoenenberg will handle the marketing of the new Kayloom, it is announced. Mr. Schoenenberg is a graduate of the textile college in Barmen, Germany, and has been active in the textile field for more than 20 years. Before joining Robert Reiner, Inc., he was connected with American Bemberg in a research capacity.

Introduction of the new Kayloom is or more than usual interest in view of a recent announcement of a machine development by a British manufacturer. This machine is said to produce a combination of knitted or woven fabrics, and reports have it that the British invention is limited to circular knit fabrics, and is in no way related to the American development, as exemplified by the Reiner machine, which is designed to produce flat fabrics.



The new Kayloom, built by Robert Reiner, Inc.

In view of the tremendous readjustment going on in the textile machinery world market due to the elimination of the German manufacturers, the firm of Robert Reiner, Inc., is making every effort to keep in step with developments and is doing its share to build sorely needed textile machines and to expand its production in the interest of American economy. Reiner has been a leader in such products as high-speed tricot machines, auto heelers, warpers, beamers and creels for all textile needs, as well as automatic bobbin winging machines and other equipment. Various other machines are being designed and will soon be announced as additions to the Reiner line.

C. P. A. and A. C. M. A. Study Textile Decontrols

A conference intended to effectuate a program of gradual decontrol of textiles by Civilian Production Administration over a period of six months, recently was held by representatives of the American Cotton Manufacturers Association and John D. Small, the administrator of C. P. A., and his staff. A general agreement on the need of early discontinuation of allocations and set-asides was reached at the conference. The conference objective was the recognition of emergency needs of certain classifications of consumrs, such as those served by industrial fabrics, and the rearrangement of reallocations in such a way as to effect a gradual decrease in percentage of allocations and set-asides, resulting in the elimination of all controls in a six months' period.

A task committee was nominated to work with the C. P. A. in studying decontrol problems. Members are Walter S. Montgomery, chairman of the board of the A. C. M. A.; A. F. Bonsal, Joshua L. Baily Co.; G. P. Barnwell, Bibb Mfg. Co.; J. E. Bradley, Pacific Mills; W. A. L. Sibley, Monarch Mills; George P. Swift, Muscogee Mfg. Co. Alternates are George Miller, Turner, Halsey Co.; John Hughlett, Dan River Mills, Inc.; Charles Sweet, Iselin-Jefferson Co.; Marshall Stone, Pacolet Mfg. Co., and Herman Cone, Proximity Mfg. Co.

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RECORDER (cont.)

To further test for error, locate a chart correctly in the platen as previously described. Return the clamps to starting position and fix both firmly to a non-extensible member, as a strip of steel. As load is applied, the pen line should parallel the chart axis indicating variable load and zero elongation. Non-parallelism indicates a variable error in elongation due to improper geometry of the tester or incorrect angle in printing the charts. It may also be due to a bent pen slide bar; or use of the wrong chart as elaborated below.

Possible causes of failure to record elongation properly. a. The ruling of the chart is not at the proper angle for this recorder. Some require lines at right angles; others have the elongation lines at less than 90° angle to the load line. For Model J, elongation lines are frequently curved, and will not record correctly on a tester requiring a chart with straight elongation lines. Some recorders magnify the elongation line, notably Models J, J-5, Q and X-3, and record incorrectly on charts not printed for the proper magnification. b. Where chart is held in guides, errors may be traced to faulty cutting of the chart, which should be a perfect rectangle, with edges cut exactly at the line printed as a guide. c. Errors can be due to failure of platen, pen and clamp to start moving at the same time, usually caused by excessive wear in the sliding mechanism.

If error still persists after the above procedure, it may be advisable to return the tester to the factory for correction.

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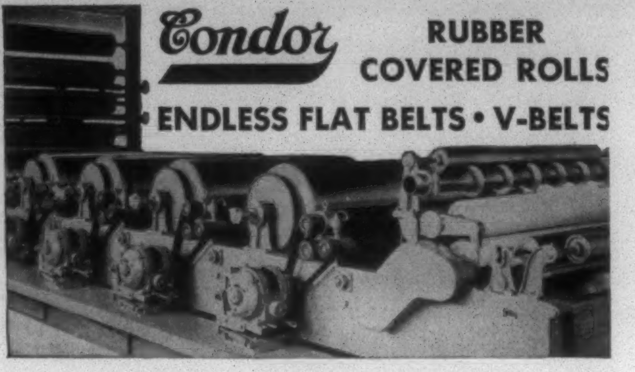

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The Philadelphia Textile Institute Seminar

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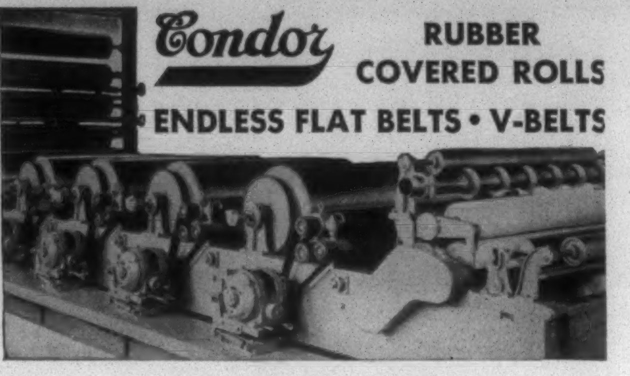

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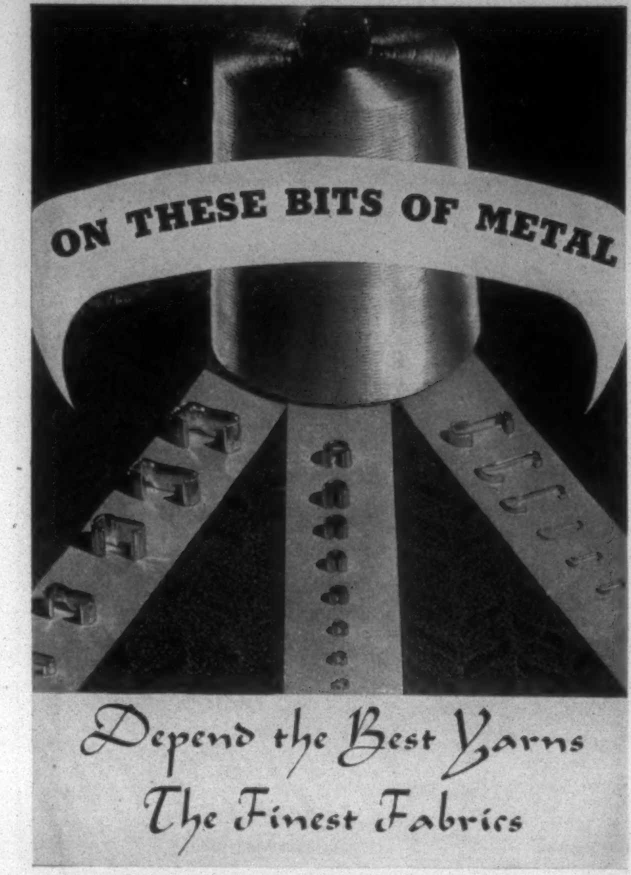

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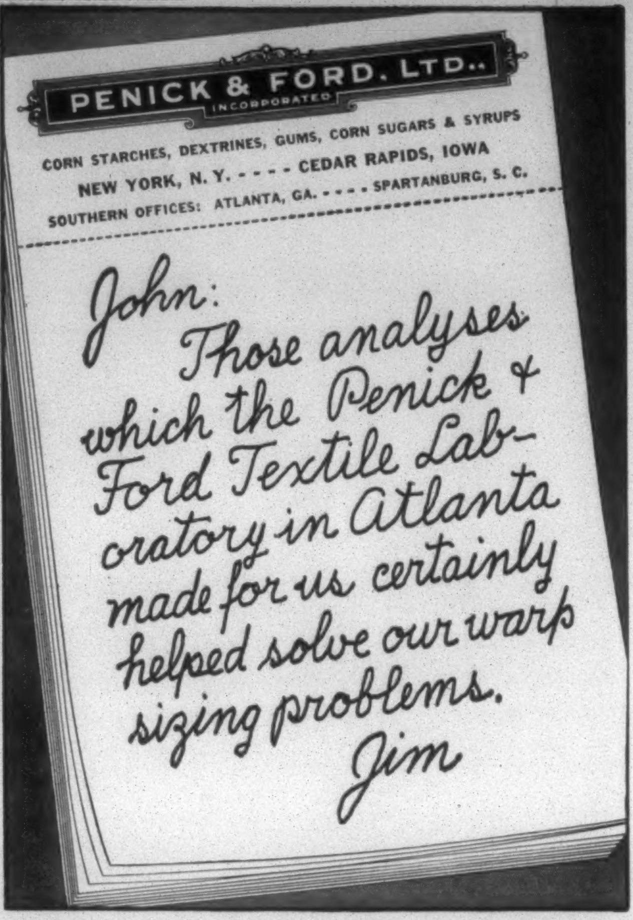
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sanitation and practical methods for treating many industrial wastes, including textile dye wastes. In those instances in which treatment of these wastes is necessary, it is to the interest of the industry or industries concerned to encourage and promote research. The sanitary engineering staff of North Carolina State College is particularly desirous of assisting in this type of co-operative project. New research laboratories for this purpose are nearing completion.

The reasons for stream sanitation are obvious to some, obscure to others. Streams and other bodies of water are important because they are: (1) The sources of public and industrial water supplies; (2) The vehicles for ultimate disposal of liquid wastes, both municipal and industrial; (3) The sources of hydro-electric power; (4) The habitat for fish and other aquatic life; (5) The facilities for many recreational uses of great financial and aesthetic value; and (6) Valuable in agriculture and animal husbandry.

Streams are being used for important industrial purposes, and this use should be encouraged and increased. There is no desire to cramp such use.

Recent Developments in Rayon Stabilization

(Continued from Page 38) stabilization might be pertinent here. It will be best to discuss the equipment in the order that it is used in plants properly equipped to carry out the process. We have used both the two-roll and three-roll padders. With the two-roll padder, we have used an auxiliary booster box or a skying roller or both to insure adequate impregnation. We have found that the time of impregnation is an important factor and varies with the type of fabric treated. We try to obtain a 100 per cent pick-up based on the dry weight of the fabric.

A covered tenter frame 60 to 90 feet long equipped with automatic temperature controls is best suited for drying the fabric. The fabric should come from the tenter frame just dry so that no curing begins at this stage. As a general rule the fabrics are framed to the desired finished width. Curing or baking may best be accomplished on a loop dryer, net dryer, airlay dryer or roller type dryer. Whichever type of machine is used, should have a good automatic temperature control. Since this is the critical stage of the process, adequate control must be exercised to prevent over or under curing. The curing schedule may be adjusted according to the time and temperature which can be obtained on the individual machine. The time of cure being, of course, inversely proportional to the temperature. Some provisions for cooling the cured fabric at the exit end should be provided. This may consist of a cooling can, fan, or skying arrangement.

Some plants have the padding, drying and curing machines operating as a continuous range. The range used for applying permanent type of water-repellents can be adapted to our process to secure glyoxal stabilization with the necessary time and heat controls. After curing, the fabrics should be washed in synthetic detergent and soda ash to neutralize the fabrics and remove excess unreacted chemicals. This can best be done on a battery of slack loop continuous dyebecks or on a continuous open width washer. Unless the fabric is to be bleached, a relatively short wash is all that is necessary.

From this point on, care must be taken in handling the fabric slack to avoid lengthwise tension. This is done in order to finish with a fabric that comes within our shrinkage tolerance of two per cent. The fabric after washing is usually opened to width and vacuum extracted, after which it is slack dried on a loop, airlay or net dryer. At this point it is often advisable to make a preliminary wash test to determine the proper width for final framing. This wash test, incidentally, serves as a check on the remainder of the finishing operations, since we can tell whether or not excessive tension have been applied. This is done by comparing these wash results with those obtained on the final test.

After slack drying, the fabrics are steamed and framed to the indicated width. The fabrics may be decatized or calendered, if necessary, but here again, excess tensions should be avoided. This is also true of the examining and tubing operations. While at first these steps may seem complicated, our experience has been that plant personnel soon fall in line with the proper method of procedure.

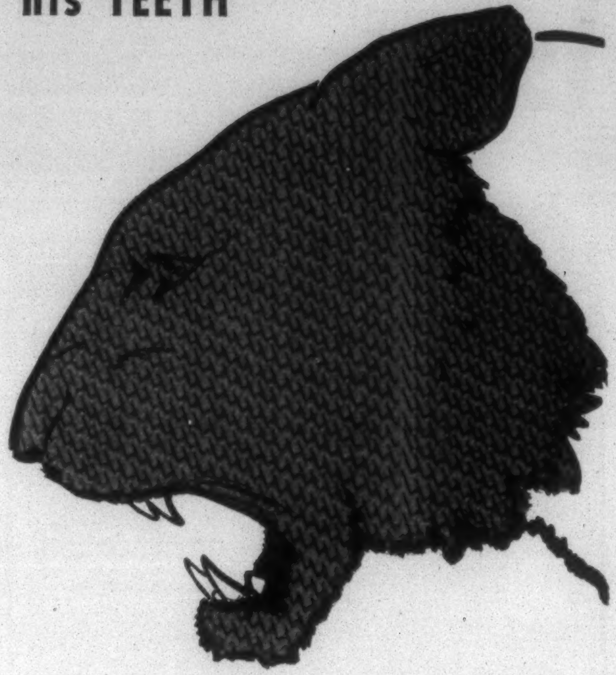
Patents and Rights To Inventions

(Continued from Page 28) of the patent examiner. The inadvertent issuing of the patent did not take away anyone's right to use the prior art, although such patent may well worry those ignorant of the prior art.

It sometimes happens that patents are issued claiming as inventions a summation of old elements, each merely adding in its own particular function and providing no different co-operation of this element in the combination over that which could be properly expected by placing them together. In such cases, where no such new or unexpected result is obtained, the claims may be held invalid because of lack of invention. This is often very difficult to prove because results seem obvious after someone has shown how to obtain them. A would-be infringer is often prejudiced in his consideration of the matter. It is very difficult to prove that a patented invention should have been obvious to others, when in fact it was not obvious to those skilled in the art for a considerable period during which the problem was present.

Since the patent can not be held valid unless it is issued to the "first" inventor, if one can prove that the patentee was not the "first" inventor he has good defense to an infringement charge. In this connection, if it can be proved that the man named as inventor in a patent is not in fact the inventor, the patent can be held invalid by a court. For example, a man may have been wrongfully included as one of two joint inventors merely because he was in a position situation, the real inventor may well lose his right to the protection seemingly given by the patent. If one claim of the patent is anticipated by the prior art, that claim may be of authority over the true inventor, or a man may have contributed only suggestions or advice as to minor features not essential to completion of the real invention. In such a held invalid by a court. However, other claims of the patent which are not held invalid may be saved by a proper disclaimer of the invalid claims. Where one believes that claims of a patent would be held invalid if a suit were instituted, it is not usual to notify the patentee of such belief, but to proceed to use the desired construction, relying on a defense of invalidity in any suit for infringement of such claims.

It must be remembered that although one believes that he can make a successful defense in a patent suit, still it costs money and time, and you may lose. The safest way to avoid trouble is to avoid using the *invention* of a patent,



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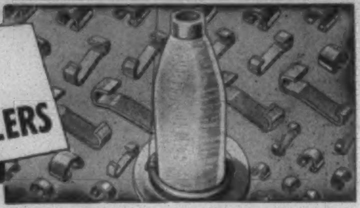

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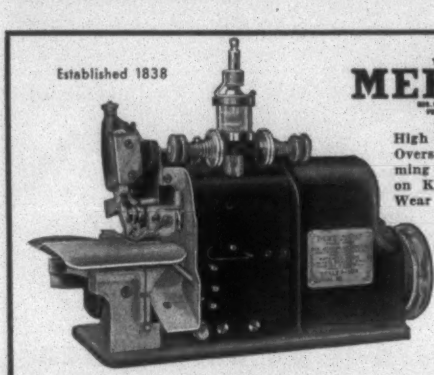

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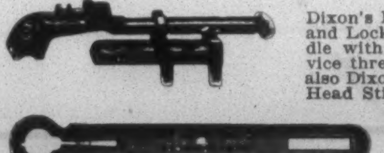

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If a license is granted under a patent, the licensee is ordinarily presumed, in a suit for royalty under the license contract, to admit the validity of the patent claims under which royalty is payable. This legal fiction is similar to that in landlord and tenant law, where in a suit for rent the lessee is estopped from proving that the landlord does not have good title to the rented property. Therefore, while the patent license is in force, the defense of invalidity is not open to the licensee in any suit for royalty under the contract, and the agreed royalty is to be paid independently of whether one has discovered evidence that may prove some of the claims invalid.

World Rayon Production At Record Low

World rayon production during 1945 amounted to 1,530,000,000 pounds, the lowest output since 1936, states *Rayon Organon,* published by the Textile Economics Bureau, Inc. Rayon production in 1945 was 46 per cent under the record 1941 output of 2,834,000,000 pounds and 26½ per cent below the 1944 level. Production in North and South American countries continued to increase in 1945 but serious declines in output occurred in Europe and Asia. For the first time in the history of the industry, rayon output in the Americas exceeded that of Europe; in fact, rayon production in the United States alone comprised 52 per cent of the 1945 world total.

World rayon filament yarn production in 1945 at 933,975,000 pounds was 26½ per cent below the 1941 all-time high level and 9½ per cent under 1944. This decline is attributed chiefly to the greatly reduced output in continental European countries and in Japan. Many of the European rayon producers incurred severe damages to plant installations during the latter months of the war. Those remaining in operating condition were unable to resume anywhere near full production after the cessation of hostilities because of raw material shortages, transportation difficulties and political and economic instability. The 1945 output of filament yarn in Europe was 59 per cent below the peak 1941 level and less than in any year since 1928. Filament yarn production in Japan during 1945 was 98½ per cent under the record 1937 figure. In contrast to these European and Asiatic declines, 1945 rayon filament yarn production in North and South American countries reached new record levels, but these were insufficient to prevent the over-all world production decline noted. Rayon filament yarn production in North and South American countries during 1945 accounted for 73 per cent of world output.

World rayon staple fiber production in 1945 amounted to 595,905,000 pounds, a decrease of 62 per cent from the record level of 1941 and 43 per cent below 1944 output. The decline in staple fiber output was more drastic than in filament yarn because of the heavy losses sustained by Germany, Italy and Japan. Total 1945 staple fiber production in Europe was 65 per cent below the record 1942 level and 49 per cent under 1944 production. Japan's staple fiber output last year was 93 per cent below the 1928 record and 74 per cent below the 1944 level. The United States' staple fiber production in 1945 was essentially at the 1944 level but, despite this stability, the United States accounted for 28 per cent of the world output and was only second to Germany in volume of production.

The 1945 world production of rayon, cotton, wool and silk aggregated 14,905,000,000 pounds, the lowest total since 1934. This 1945 figure is 11 per cent under 1944 production and 32 per cent under the 1937 record high output. The 1945 world output of these four fibers declined below their 1944 levels by the following percentages: rayon 26 per cent, silk 16½ per cent, cotton ten per cent, and wool four per cent.

Based on preliminary reports received from various foreign rayon producers covering their rates of operation during the first quarter of 1946, it is indicated that total world rayon output this year may approximate 1,700,000,000 pounds, a figure about ten per cent above the 1945 level. Raw material shortages, slow rates of plant rehabilitation, and generally unsettled economic conditions are retarding a return to normal operations in many foreign countries.

Total domestic shipments of rayon in June amounted to 65,800,000 pounds, or ten per cent below May. Of this total, filament yarn shipments aggregated 51,800,000 pounds, a decrease of nine per cent from the May level, while staple fiber shipments at 14,000,000 pounds were 12 per cent below the previous month. Total domestic deliveries of rayon for the first six months of this year aggregated 418,300,000 pounds, an increase of ten per cent over the same period last year. Filament yarn shipments for the first half of this year were ten per cent over the same period last year, while staple fiber deliveries were up eight per cent in the same comparison. Total filament rayon stocks in producers' hands at the end of June amounted to 7,100,000 pounds and staple stocks were 1,900,000 pounds.

Wages In Southeast Approximate Nation's

The hourly wage average for cotton mill workers in the Southeast is approximately that for the nation as a whole, according to the United States Bureau of Labor Statistics. As of May, 1946, Southeastern workers were earning an average of 75.2 cents an hour, while the national average was 75 cents. In Georgia, the textile industry is employing five per cent more workers than at this time last year, in spite of the fact that, in March and April, 800 workers were dismissed. During the same months, however, manufacturing employment as a whole in the state increased by 1,400 workers, primarily because of the settlement of the steel and automobile strikes.

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Cotton Goods Market

Once again New York City's Worth Street cotton goods trade was in most cases out of the market pending final Congressional action on the Office of Price Administration, though reports were heard of some houses releasing spot goods here and there at ten per cent above last O. P. A. prices. These goods sold involved industrial drills and osnaburgs, the latter type fabric going mostly to the bag trade, though gray goods sources describe the quantities involved as minor.

The market heard reports that goods were being released for quick delivery with the prices running anywhere from seven to 25 per cent, though generally commission house executives were inclined to doubt mills were selling as high as 25 per cent.

There are some in the market who lean toward the belief that, should Congress drag out the price control issue, houses will start moving some spot lots, with prices averaging somewhere about 15 to 20 per cent over the final O. P. A. ceilings, according to observers. This would generally be in line with the increases the industry would have received under the amended O. P. A., it is explained.

The rising cotton price is going to become the No. 1 problem before the cottons industry once the price-control matter is out of the way, some market circles say. Certainly the continued rise in the price of the raw material is going to be reflected in mill prices, it is reminded. All prices must be figured from a base of raw cotton costs, it was said, and with the price of the staple rising, prices of the gray cloth will have to follow. With the market without action, fine goods men, anxious to dispose of fabrics in a possible free market at the lowest price which will grant a fair profit, watch the rising cotton prices carefully.

Cotton broad woven goods production (except tire fabrics) in the first quarter, 1946, amounted to 2,252,000,000 linear yards, an increase of eight per cent over the fourth quarter of 1945, but five per cent less than the yardage produced in the first quarter of 19445, the Census Bureau reports. The increase in production was reflected in all fabric groups except cotton duck. The fabric group designated as specialties and all other fabrics showed a marked increase to 115,000,000 yards, 24 per cent higher than the quantity produced during the fourth quarter of 1945, and 36 per cent higher than production during the first quarter of 1945. Production of 131,000,000 yards of wide cotton fabrics and 315,000,000 yards of fine cotton goods represented an increase of 12 per cent in each class over the previous quarter. Production of 69,000,000 pounds of cotton tire cords and fabrics this quarter was five per cent greater than in the fourth quarter of 1945, but six per cent lower than in the first quarter of 1945.

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Cotton Yarns Market

The continuing rise in prices of raw cotton, complicated by indications of a small 1946 crop, has been the chief concern in the cotton yarn market during recent weeks—even surpassing the problem brought about by uncertainty surrounding reinstatement of price ceilings. Representatives of spinning plants, who hoped to be able to offer supplies for the third quarter at ten to 15 per cent above the last prevailing ceilings, state that they will have to go even higher if cotton continues to boom.

There seems to be a general effort among selling agents to exert pressure on their mills to keep prices down wherever possible. Owing to the uncertainties in the outlook, advance selling has nearly stopped. If spinners are satisfied with the ultimate decision in regard to the pricing situation, many types and counts of yarns which have not been on the market for many months are expected to return.

Market representatives state they already are informed as to the prospective needs of their customers and whether prices advance more or less should have little effect on yarn demand for some months to come. They say customers are more interested in assurance of supply of suitable yarn than they are as to costs, and this applies chiefly to industrial consumers, whose main interest rests in the cost to them of other manufacturing materials for which the price advance probably will be much more important.

Some of the spinners' spokesmen are in doubt as to the conditions under which yarn output may have to be merchandised toward the end of this year. They appear to feel that with controls lifted further during the current quarter, there are certain counts and kinds of yarn in which spindle operations are likely to be concentrated for various reasons, so that actual and potential supply for market disposal may reach a total that will cause a reaction against prices.

The nation's cotton farmers will harvest approximately 17,991,000 acres of cotton this year, the Agriculture Department has predicted. The department estimated that 18,316,000 acres were under cultivation on July 1 but normal abandonment will account for the difference. American Egyptain cotton in cultivation on July 1 was estimated at only 2,800 acres—less than half of last year's acreage and only 1.5 per cent of the peak of 193,000 acres grown in 1942. The department said the indicated 1946 cotton acreage was 3.2 per cent more than last year, but 28 per cent less than the ten-year average.

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ACME STEEL CO., 2838 Archer Ave., Chicago, Ill. Sou. Office and warehouse, 603 Stewart Ave., S. W., Atlanta, Ga., F. H. Webb, Dist. Mgr. Sou. Sales Reps.: C. A. Carrell, 523 Clairmont Ave., Decatur, Ga., Phone Dearborn 6267; Marcus M. Brown, 1231 Lexington Ave. (Phone 8583), Charlotte, N. C.; William G. Polley, 937 Cherokee Lane, Signal Mountain, Tenn., Phone Chattanooga 8-2635; John C. Brill, 309 Magazine St., New Orleans, La., Phone Magnolia 5859. Warehouses at Atlanta, Ga., Greenville, S. C., New Orleans, La.

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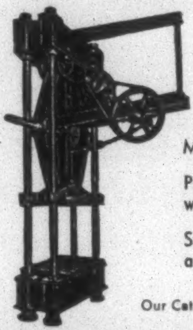

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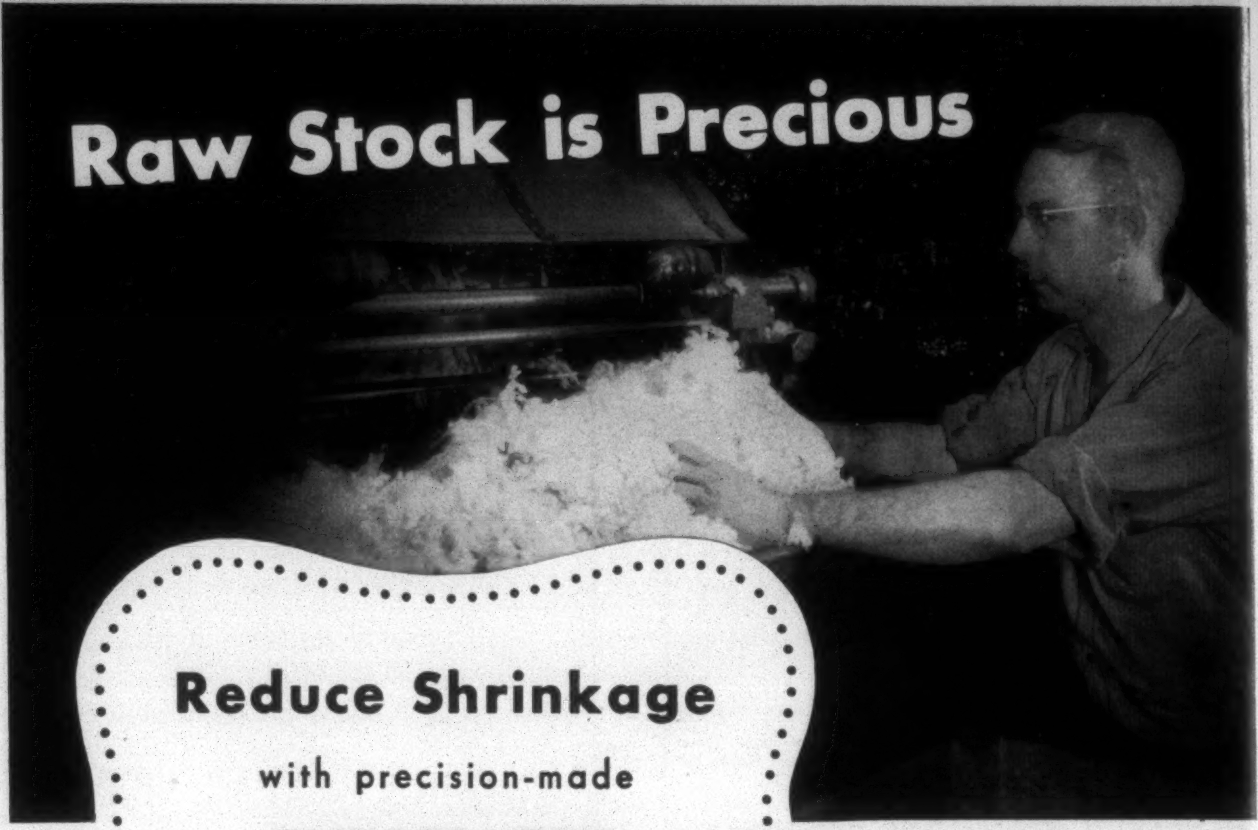

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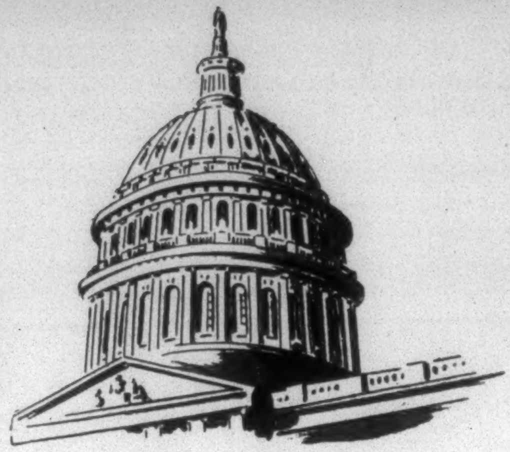

[Exclusive and Timely News from the Nation's Capital]

THE NEW PRICE CONTROL BILL, different from the bill vetoed only in a shift in the profit motif and the additional number of commodities released from all control, soon goes to the President. No one knows whether he will accept or veto it. The certainties are that if vetoed, Congress will not override it, and it is the last price control bill Congress will write. After the most strenuous session in 15 years, Congress is tired, and wants to go home and look after the political fences. It is this bill or no price controls at all. The President's apparent hope of using his veto as effective political capital was a dud, and immeasurably weakened his leadership and prestige.

Many predictions of a second veto of the bill are made, for those who hailed the first veto as a victory for controls find little comfort in the new bill. Urban, industrialized centers, concentrated in relatively few states, are demanding retention of strong price controls, while manufacturers and rural populations demand abolition of controls. Producers are hopeful of Presidential approval; labor is resentful and angry, and threatening new strikes.

Labor unions made a strenuous attempt, sparked by Bowles and Porter, to touch off a price rise panic to defeat decontrols, but the whole thing backfired. Sporadic "buyers' strikes" were staged by C.I.O. members and paraders hired at 65 cents an hour, but the public went on its way looking for bargains or short goods coming out of hiding.

A sharp, temporary increase was expected when ceilings were removed. Increases have been sharp in those lines where substantial wage increases were added to production costs last winter, with no adjustment in ceilings. Other increases have simply absorbed current black market prices or replaced the withdrawal of subsidies.

As a net result of his veto, the President finds himself at loggerheads with his party leaders in Congress, with Majority Leader Barkley actually working closer with Senator Taft, of the minority, than the President. Much of the Senate floor battle between them was a political maneuver. Barkley wanted the control problem disposed of, so Congress can recess, and Taft did too.

While the President has applied his veto, equal to a two-thirds majority, he has been unable to gain enactment of a new minimum wage bill without farm parity increases, or push through his "time-and-a-half" formula for higher unemployment compensation, an F.E.P.C. law, or old-age benefit enlargement, all of which labor vociferously demanded, or gain passage of his own labor draft proposal, which is locked up in the House Rules Committee.

Retirement of Bowles will tend to ease some of the friction with Congress. His alliance with C.I.O. has gone far to cripple and hamstring the Truman Administration, and to arouse bitter antagonism between the President and Congress.

(Over)

Many members of Congress would like to know why the country is so complacent about the monopoly power of labor unions, with its unrestrained use producing economic paralysis at will. They are wondering, too, why no greater protest arises in the use of the tremendously powerful veto to the sole advantage of the unions, and to such an extent as to allow them to virtually take possession of the White House. These are questions that will be asked with increasing frequency as the November election approaches.

When Congress will recess is uncertain, but Aug. 1 seems probable. Many pending measures will be left without action. All bills die at the session's end in December. Several important committee inquiries will continue during the recess.

C.I.O. believes its Southern recruiting drive will begin to pay off in August, but it's having a slow, hard pull.

Purchase and operation of farms on a large scale is being discussed by C.I.O. unions. They resent failure of the farm bloc in Congress to help retain O.P.A., and want a yardstick on "legitimate" farm costs. They would sell through city-operated markets to union members.

Employers will be relieved of double liability under various decisions on veteran's super seniority if Congress acts on the bill of Senator Gurney which is slated for favorable action. The Labor Department opposes such relief and demands that employers pay back wages to any civilian worker made idle in following conflicting interpretations of the Selective Service Act. The bill would nullify the Supreme Court's Fishgold decision.

Prospect of higher payroll taxes next year for Social Security purposes becomes more unlikely as the House divides sharply on the proposal, with Senate action unlikely, too. It's a 50-50 chance that the taxes will be "frozen" again by joint resolution at one per cent for employers and employees each. Without such action, these taxes will go to 2 1/2 per cent for each next year.

High taxes will continue for at least two years if the Administration has its way. But the tax committees of Congress will make a survey during the fall and then decide whether to bring in a bill in December revising wartime levies. Both individuals and corporations are due for a cut in rates on their 1947 incomes, according to present plans.

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